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General Literature.

THE FOLKLORE OF GREENLAND.

Esquimaux Tales and Legends, translated from the Communications of Native Informants. By H. Rink, Governor of South Greenland. With Supplement, containing an Appendix on the Esquimaux. [*Eskimoiske Eventyr og Sagn, oversatte efter de indfødte Fortælleres Opskrifter og Meddelelser.* Af H. Rink, Inspektør i Sydgrønland.] Kjöbenhavn : C. A. Reitzels Boghandel, 1866. [*Supplement, indeholdende et Tillæg om Eskimoerne.* Af H. Rink.] Kjöbenhavn : 1871.

THE development and significance which the study of ethnography and the history of civilisation has acquired of late years, and the small degree of trustworthiness of the information upon which we are often forced to rely, combine to magnify the importance of these communications respecting a people dwelling at the furthest extremity of the earth; the rather that they come from a person peculiarly well qualified to guarantee their authenticity. He occupies a post in that remote Danish possession which assures him an ample supply of the required information, and he is further assisted in making use of it by the fact that he has constantly endeavoured to come directly in contact with the native inhabitants, in dealing with whom his familiarity with their language is also very serviceable. To these qualifications must be added a most praiseworthy sympathy for the poor inhabitants of these polar regions, who not only have to contend against their icy, niggardly climate, but are obliged to submit to the oppression and contribute to the support of the missionaries and other European residents as well. The results of his experience and his investigations upon Greenland and its inhabitants are set down in the two volumes named above. Though they deal chiefly with the folklore of the Esquimaux, they also contain a good deal of circumstantial information on other points relating to the people, in furnishing which of course the folklore itself is amongst the most important of our sources concerning the religion, the history, the usages, and the intellectual and material condition of past and present times. Since the appearance of the first volume, the value of this work of Rink's has accordingly been so generally recognised that the supplementary volume is published at the expense of the Scientific Association at Copenhagen and the minister for ecclesiastical affairs and public instruction.

I shall return presently to the legends, but will begin by noticing some of the religious opinions of the Esquimaux, together with the usages to which they have given rise, especially those which have analogies in other countries. Thus according to the view of the Greenlanders, when still heathens, divine justice displayed itself mostly in this life,

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yet they had also, it is said, the conception of rewards and punishments after death, and believed that witches and bad men came into the upper world, where they suffered from cold and want, and played with a walrus head, which was the cause of the northern lights; they were therefore called *Arssartut*, or "those who play with missiles." The lower world, on the contrary, where warmth and plenty reigned, was for the *Arsissut*, or "dwellers in abundance;" that is, all who had done great deeds in their earthly life, or had undergone much suffering, especially those who had perished at sea, and, lastly, women who had died in childbirth, a conception which is met with also in the Marquesas islands and in the Lechrain, a district in Bavaria. The Greenlanders believed that a child murdered at its birth became an evil spirit, *angiak*, a belief also met with amongst the Norwegians and the Norwegian Lapps. The *Oromatuas*, the most powerful of all the spirits recognised by the inhabitants of Tahiti, had the same origin, and amongst the Polynesians in general the ghosts of children passed as being peculiarly malevolent. It is also noticeable that the Greenlanders trace the origin of death to a quarrel between two of the first men, one of whom said: "Let day and night alternate, and let mankind be mortal;" and the other: "Let it be always evening, and may men live for ever." This tale or myth bears a striking resemblance to a South African one of which Bleek gives five different versions (*Reynard the Fox in South Africa*, Nos. 31-35, "The Origin of Death"). Singing in the ears, which is variously interpreted in different countries, is said by the Greenlanders to be the voice of the dead asking for food, while to the Scotch it announces the death of a friend (for which reason they also call it "the dead bell"—Hogg, *Mountain Bard*, 3rd ed. p. 31). The conception of the *Iglokok* or *Igduinak*, a being in the form of a half-man, with half a head, one eye, one hand, and one leg, is met with elsewhere, as amongst the modern Greeks and the Musselmans; there is no reason for supposing that the latter derived it from the Zulus (Tylor, *Primitive Culture*, i. 353); on the contrary, it is more probable that it has everywhere arisen independently. It is forbidden to point with the fingers at the *Inua* or genius of certain spots, such as mountains, headlands, and ice-fjords, because this is supposed to make him angry. The same prohibition in Germany extends to the sun, moon, and stars; and though the modern Christian explanation is that you may run a little angel through in the act, the original heathen motive for the superstition is very likely to have been the same as in Greenland, though of course it may have been formed independently in the two cases. The *Angakoks* (conjurers) and *Iliseetoks* (witches) breathe forth fire, as in the German saga of Dietrich of Berne, and in the Anglo-Saxon *Havelok the Dane*. Amongst the accomplishments of the *Angakoks* was that of opening the bodies of the sick, taking out the entrails, washing them, and putting them back in their proper place. This too is an old idea, especially common in the East, from whence it was probably derived. Cf. my notice in the *Gött. gel. Anz.* 1868, p. 1656; to which may be added the following passage from an unpublished dialogue dedicated to the younger Lorenzo de' Medici:—

"Is (sc. medicus) ut fertur, daemones cacodaemones magica arte invocat atque coercet, lubetque ut languentis illius quem vult simulacrum vel formam daemones illi sibi deferant et eam scindant atque evicerent. Ibi vero cum magno lumine consecratae candelae passim viscera omnia suis manibus revolvit atque oculis suis diligenter perlustrat, ut aegrotantis illius singulos intueatur languores. Tandem vero de invaletudine ac invaletudinis causa bene conscius factus, illud simulacrum reintegrari atque consui et in suum locum reduci præcipit, post vero languenti, cuius erat simulacrum medelas adhibet opportunas, si autem de salute illius desperet, id suis affinis patefacit, ne in vanum pro salute sua

laborent. Sed aegrotantis prius ac genetricis ejus nomen solertissime perquirat, de genitoris autem nomine nihil sibi curae est, nam de vero patre incertum nomen esse dicit, matris autem certum: ne sui daemones aliam aegrotantis loco formam sibi deferrent.”—*Il Paradiso degli Alberti* ... a cura di Alessandro Wesselofsky, vol. i. pt. i. p. 264, Bologna, 1867.

Evidently here the same process is applied to the image which the physician was supposed by the common people to perform on the sick person himself. Hydromancy was also known to the Greenlanders; the Angakoks used to divine from water the fate of persons and things that had disappeared. The conjurations of the Angakoks used to take place in a perfectly dark house, after they had had their hands tied behind their back and their head made fast between their legs. When the incantations were over, it was allowable to strike a light, and then the Angakok was seen free from his bonds, exactly in the approved style of a modern medium. The belief that the ghosts of departed mortals can be killed over again is not peculiar to the Esquimaux; it is shared by the ancient Hindoos, the Tartars, and many European nations, such as the Greeks, ancient and modern, the Kelts, the French, Scandinavians, Germans, &c. Further may be noticed the reluctance of the Esquimaux to pronounce the names of the dead, or of persons present, and especially their own name, a prejudice met with amongst other uncivilised races, as well as in the elder *Edda*, and in Scandinavian and apparently in early English popular verse (Tylor, *Early History of Mankind*, 2nd ed. p. 142: cf. 127; Svend Grundtvig, *Danmarks Gamle Folkeviser*, ii. 339, 340). Any one who bears the same name as a deceased person changes it in order to deceive and escape from death, in the same way as amongst the native tribes of America and the Sunda islands. As another superstitious opinion may be mentioned the belief that evil-smelling things, especially old urine, have a peculiar power of banishing supernatural beings (comp. the Icelandic *alfreki*), and this is probably the explanation of the custom followed in Greenland of holding a vessel containing the same over women in labour, because women in that condition are supposed to be especially exposed to the attacks of evil spirits; a belief of which traces may still be found amongst civilised nations. The *couvade* in the narrower sense, when the husband, after his wife has been delivered, takes her place in bed, and remains there, while the mother gets up and goes about her business, “is only an addition, to deceive the sickness-spirit of puerperal fever, and to protect the new-born infant from the pursuits of demons desirous of substituting a changeling” (Bastian, in Lazarus and Steinthal’s *Zeitschrift*, v. 153, sqq.). In Greenland a child soon after its birth is licked by the mother all over lengthwise from the head to the toes, in order that it may enjoy health and long life; in Labrador the operation is adjourned till the end of the first year. The Esquimaux believe that spirits are unable to pass through running water, a superstition that prevails amongst the Lusatian Wends, who still make a point of placing water between themselves and the dead as they return from a funeral, even breaking ice for the purpose if necessary. And Sir Walter Scott (in a note to the *Lay of the Last Minstrel*) observes: “It is a firm article of popular faith that no enchantment can subsist in a living stream. Nay, if you can interpose a brook between you and witches, spectres, or even fiends, you are in perfect safety. Burns’ inimitable *Tam o’ Shanter* turns entirely upon such a circumstance.”

Leaving the superstitions of the Esquimaux, we turn now to their legends, with respect to which Rink remarks that the more recent amongst them show little disposition to spread along the coasts, but that on the contrary every district contents itself with recording the occurrences of the immediate neighbourhood and the last generation. The distance from Labrador makes it therefore exceedingly im-

probable that there should have been a constant exchange of legends kept up after the Esquimaux had reached their present places of settlement, and one is driven to suppose that the older legends which are common to both countries must date from a time when the present inhabitants of both stood in a much nearer relation to each other, that is to say, before they separated to spread east and westward along the shores of Baffin’s Bay. The substance of the legends is partly religious, partly historical, partly poetical; but, as a rule, all three elements are mixed together, though there are also some that belong exclusively or principally to one or other class. In his section on religion, Rink has fully discussed the religious element, which is, without doubt, the most important and the most universal. The more recent legends are those which may be regarded as chiefly historical. They give us a picture of the breaking up of the nation into a number of small communities which, as above observed, only preserve the memory of quite recent events in a single spot. Such narratives generally reach back only 100 years, more rarely 150, but the narrators can upon the whole give an exact account of genealogies within this limit, that is to say, for five or six generations. However, though the persons, and the principal incidents in their life, are really historical, and correspond with the information derived from other quarters, they are nevertheless embellished with ingredients taken from older legends, and the spirit-world is made to play a considerable part in the story. As for the old Scandinavian settlers in Greenland, the ruins of their habitations are known to exist in two principal localities in South Greenland, that is, in the neighbourhood of Julianshaab and Godthaab. There can be no doubt that in the years immediately following their destruction, many tales were told concerning them by the native inhabitants, yet only two still survive; one, the most important, giving an account of a war between the Esquimaux and the Northmen, is localised in both those districts. That there should be a poetical element in the legends is a matter of course, as otherwise they would not have arrested the attention and seized the fancy of the listeners, or, in other words, they would have failed to inspire that love which has preserved the older legends unchanged for upwards of a thousand years. The legends are also important because they offer a speaking picture of the Esquimaux’s way of looking at life, so that we can see at once in what respects it differs from ours. As Rink remarks, we ought not to be surprised at the absence of any pictures of what we consider beautiful in nature, for it is only in few spots that the Esquimaux catch in their summer excursions a glimpse of green valleys, with a little scanty shrubbery. Their taste does not lead them to seek out such places where they exist: far otherwise; the sea and winter with all their dangers, which the fancy pleases itself by even heightening, on the one hand, and on the other an ample provision of lard and meat, by the help of which the Greenlanders bid defiance to those dangers, far outweigh to his thinking all those advantages which the sun draws from the lap of earth under a brighter sky. The legends reflect the life of man as truly as they do the moods of nature, and one does not have to read far in them to see that property counts for literally nothing, while courage and strength are everything; that some expend their strength chiefly in dashing hither and thither in their *kajak* (the Esquimaux fishing-boat), and stretching so far out to sea that at last the tops of the highest mountains look like the head of a seal bobbing up and down upon the surface of the water; that others again are admired and emulated for the fortitude with which they endure the severity of winter, and go out fishing, after all their comrades have given up the idea in despair, and so save them from perishing with

hunger; and that there are yet again others who set at nought the infirmities of old age, and as grandfathers continue to procure the necessary means of support for their families. We see from all this how greatly the Esquimaux is absorbed in the "struggle for existence," which leaves him little leisure to admire the beauties of nature, and yet they do not escape him altogether, as we see from the following song for summer:—

"Oh summer warmth, who hast come again now—Not a breath of air stirs, ama hai,—And there is not a cloud in the heavens, ama hai—Weeping with emotion I stretch myself out upon the earth,—The good reindeer do the same—Between the mountains one sees them grazing in the dewy distance—Haija haija hai—Oh what delight, what happiness!—Aija aija haija hai!"

Still more attractive is the deep feeling for the beauty of nature in the following saga:—

"A seal-hunter in the island Aluk, on the east coast of Greenland, was distinguished beyond all his countrymen for the love of his native home, for he never left it even in the summer time. At the beginning thereof his great delight was to watch the sun rising above the waves, showing, as it sometimes will, a momentary glimmer, and then again disappearing. But when a son that he had grew up, and could not resist the desire to follow his companions on their summer's journey, he persuaded his father to travel with him towards the west. But scarcely had they proceeded so far inland as that the sun appeared to them to rise over the land instead of out of the sea, the father refused to go any farther, but turned back upon the spot. And when they had got back to Aluk, the old man left his tent early in the morning and stayed without. At first they heard his voice, but after a while everything was still, and as his children came out to look for him, they found him lying dead upon the ground, with his eyes turned towards the sun. It was joy that slew him in the very moment when he saw it again rise from over the sea."

A deep feeling for nature can scarcely be more touchingly or more impressively expressed than is the case here. We see, in this respect, too, how essential an exact knowledge of the tales and legends of a people is to the true understanding of its inner nature, and how serviceable Rink's collection is. He also communicates a series of songs, from which the following love-song is taken:

"I turn my gaze ever towards the south—For by the headlands of Isna, by the sea-shore of Isna—He will appear from the south—This is the way that he will choose,—Korsarak will surely come by the headlands,—Korsarak will surely be able to do this;—But perhaps he will not come—Till the plaice fishing begins—Till one begins to haul in the plaice."

Besides the legends, tales, and songs, of which the two former offer many and startling points of resemblance to those of widely distant lands (as I have pointed out elsewhere, *Heidelb. Jahrb.* 1869, Nos. 7 and 8), Rink has also given us a circumstantial treatise on the means of support and the mode of life of the Esquimaux, on their language, social organization, manners, customs, and usages, their religion, their intellectual condition, the presumable birth-place of their race, and its relationship to other peoples, with, finally, the influence of Europeans upon the natives. I have already quoted some passages from this section, to which the following may be added. Before the arrival of Europeans, the Esquimaux showed scarcely any signs of spiritual development, except in their legendary poetry, and in a certain very limited proficiency in the healing art, in astronomy, and in the computation of time. As for their descent, Rink contents himself with remarking that after much enquiry it has been concluded that the original inhabitants of America do not constitute a race apart, but show, though in a lesser degree, the same kind of variation as the inhabitants of the Old World, so that from the Esquimaux, through their nearest Indian neighbours on the west coast, a gradual transition to the other Indian tribes of North America can be traced. As to the influence of Europeans on the Esquimaux, Rink observes that we have seen so many cases in which the native inhabitants of various

countries have been exterminated by the introduction, through Europeans, of sickness and intoxicating liquors, as well as by open warfare, that it is especially instructive to trace the effect of such contact when the requirements of the native population are most carefully considered, as has been done by the Danes in Greenland. The results unfortunately leave much to be desired, for in spite of all apparent good intentions, in spite of many steps taken for the security of the population, it is still chiefly regarded as an object of religious and commercial speculations. The attempt was made, it is true, to draw a distinction between the traders and the missionaries, but this proves nothing, for in the first place both systems have a common origin, and in the second both together form, as against the natives, a solid and united whole; so that the ostensible separation only serves as a subterfuge for those who wish to justify their party at all hazards, instead of considering how the actual grievances of the natives can be righted. Without going into the religious situation of the people, still, in spite of all the missionaries, of a very meagre description, it is interesting to learn what constitutes the material prosperity of a Greenland, and for this purpose we give the inventory of the possessions of a man who was not to be considered exactly poor, as it was taken down at Rink's instigation. He owned a very miserable little house with a clay stove in it, which he shared with eighteen other persons, but he had no boat for long voyages, and no tent. He possessed one *kajak*, with the needful clothes and implements, amongst which were two fish-lines, one rifle, one chest of small tools, two furs with stuff coverings, one coat of coarse cloth, one vest, four pairs of breeches, two pairs of boots, two shirts, and a cap. Of his eighteen housemates, three possessed a *kajak* apiece and a rifle in common, but all were much worse off for clothes than the head of the household. They were also joint possessors of three lamps and a small fishing-line, and scarcely any other household utensils. From this one can easily form an idea of the possessions of a *poor* Greenland, which Rink also enumerates; and yet there are European labourers of whom one could not give a very much better account, even in countries famed for their wealth.

As to the Moravian missions in Greenland, Rink observes that their principal purpose is to procure the society consideration in Europe by advertising its possession of four several stations in that remote country; and it is remarkable that public opinion has been so far imposed upon as to believe not only that the European residents at them are martyrs of self-denial and self-sacrifice—whereas they really lead a very comfortable life, amongst a submissive population, secured from material cares by their official position—but also that they are the only Christian community established in Greenland, which is quite untrue.

As to school instruction, it is observable that the Greenlanders show great receptivity in other matters than religion, and possess by no means despicable abilities. Attendance at school seems more popular than in other countries, so that reading and writing are as universal as in the most enlightened parts of Europe; while the higher instruction presents quite respectable results. It is especially remarkable to see how many of the natives combine scientific studies, which they are compelled to pursue under the most disadvantageous external conditions, with the exercise of their national industry. These and some other circumstances which speak favourably for the natural capacity and moral disposition of the Greenlanders give us a ray of hope for their future in spite of many darker shadows. This ray will be the more welcome to the philanthropist as the population has already fallen off frightfully. According to

Egede's estimate in the middle of last century, the population of Danish Greenland amounted to about 30,000; in 1863 it had diminished to 9461, while in Labrador the proportion is still more distressing. These numbers speak for themselves, and confirm the experience made elsewhere of the effect of contact between Europeans and uncivilised nations; so that it would seem the Danish government has not yet hit upon the right method of protecting the native inhabitants of Greenland. I cannot omit this opportunity of referring to an excellent work in which the subject under discussion has been exhaustively investigated. I mean Georg Gerland's book, *Ueber das Aussterben der Naturvölker*, Leipzig, 1868.

Here I must take leave of Rink's very attractive and instructive work, which, besides its other merits, has that of correcting several erroneous statements of Egede's and Crantz's, while its own intelligence may be received with unlimited reliance. Besides this, there are a number of woodcuts, executed by a native artist, to serve as specimens of inland art; also a photographic group of forty-one Greenlanders, partly of pure, partly of mixed descent; and two pretty chromo-lithographs of Greenland scenery, executed by a printer of the latter class. It is interesting to compare these woodcuts with those in Mitford's *Tales of Old Japan*, which were also the work of native artists: these last have certainly a higher degree of technical merit, as was to be expected from the superior antiquity of the art in Japan; but in correctness of proportion and drawing, the palm certainly belongs to the Greenland Dürer. FELIX LIEBRECHT.

Souvenirs de la Maréchale Princesse de Beauvau, suivis des Mémoires du Maréchal Prince de Beauvau, recueillis par Mme Standish (née Noailles), son arrière-petite-fille. Paris.

THE *princesse de Beauvau* was one of the very few personages of the *ancien régime* who lived through the Revolution, until the Empire, without ever varying in her opinions or her conduct. She and her husband, who was fortunate enough to die a natural death in 1793, were amongst the most eminent members of the liberal aristocracy which did so much to make the Revolution possible by protecting "philosophers" from persecution and making enlightenment fashionable. The present volume is a monument of the princess's constancy at once to her husband's memory and to the principles of '89, and it reads rather like the life of a righteous man, for whose sake the city might have been spared, had there been fifty such within it. The memoirs, chiefly compiled by Saint-Lambert, the life-long friend of the *maréchal*, are practically an apology for the eighteenth century, a plea for the governing classes, that, if they had had time, they would have reformed the government for themselves. It is curious to read a list of the good deeds of Louis XV., though the writer's view of him is substantially that which has since prevailed; but every page gives a fresh illustration of the chasm between the court and the people, which prevented even the virtues of the court reaching those whom they were meant to benefit. The prince de Beauvau was thoroughly upright and conscientious, but half the occasions of his opposition to the crown were mere personalities—e.g. he would not allow his wife to visit with M^{me} Du Barry, and the dangers he so courageously encountered were, literally, the royal frown and nothing more. The king showed his displeasure by not speaking when etiquette condemned them to drive out together, and this was political martyrdom; but the country at large naturally never heard of either the offence or its punishment, so it ignored the merits of the victim.

A more important exercise of public virtue was his oppo-

sition to the decree abolishing the parliaments in 1771; as governor of Languedoc, he persisted, in spite of direct instructions to the contrary, in releasing fourteen old women from a life-long captivity in the Tower of Aigues-Mortes, where they had been imprisoned for Protestantism ever since the Dragonnades. In his *discours de réception* at the Academy, he set the fashion which has found so much favour since, of wrapping up a political rebuke in apparently loyal and decorous phrases. It was soon after the disgrace of his friend and relative, the duc de Choiseul, and he took advantage of the usage which obliged him to praise the reigning monarch to praise him for all the measures planned and executed by the discarded minister. Voltaire was delighted with the artifice, and expressed his admiration in one of those wonderful effusions of humility of which he was so fond: "The reed, lifting up its little head, says very humbly to the oak," and so on. After the accession of Louis XVI. the prince was appointed to the government of Provence, and we can readily believe that his administration was just, merciful, and as enlightened as the central authority would permit. He saw that the prosperity of Provence depended on its seaports, and we might never have heard of the *Marseillaise* if a plan which he recommended with some warmth had been adopted. He proposed to bestow on Marseilles the privilege of religious liberty and freedom of trade, so as to attract thither all the commerce of the Mediterranean; the court objected, and he used to say to his wife, "Nous ne sommes pas encore assez mûrs, j'y reviendrai, on s'éclairera;" but unfortunately it was already 1788, and half Aix was starving from the suspension of the *Parlement de Provence*. His last appearance in history is in 1789, when he was invited to take a place in the council of ministers; he at first made his consent conditional on that of Malesherbes, but an urgent letter from Louis XVI. caused him to reconsider his resolve; he remained in the council for five months, and then passed into retirement. He had never been much in the confidence of the royal family, and though of course he continued loyal to the last, he watched the course of the revolution with melancholy tolerance. His conscience had been troubled long before on the score of feudal and seigniorial rights; he had wished to abandon them formally, but was baffled by an entail, and when the law abolishing them was passed, he hastened to make all the sacrifices it imposed on him. Yet there must have been a good deal of the old aristocratic leaven left, for his wife, who shared all his thoughts, rejoiced in 1795 that he had not lived to see "le désordre et le déplacement de toutes choses," exemplified by a peasant-woman's having money enough to buy a feather bed (p. 108). It is easier to sympathize with her gentle regrets when armorial bearings were made illegal, not that they were necessary to her dignity, but because they had been dear to her since her lost husband's arms were first quartered with her own.

The first half of the volume, the *Souvenirs*, is the expansion of a sentiment which we must let the *maréchale* express in her own words:—

"Pour expliquer comment deux personnes se sont aimées pendant quarante années, non comme amis, non comme époux, non plus même comme amants, mais comme s'ils n'avoient été créés que pour jouir l'un de l'autre, pour confondre leurs goûts, leurs intérêts, pour trouver de continuel motifs de se préférer à tout, pour ne se quitter jamais sans peine, ne se retrouver jamais qu'avec un plaisir mêlé d'émotion; pour expliquer, dis-je, la nature de cette intime union, il faudroit un nom qui ne convint qu'à elle. Celui de *passion* me semble le seul de ceux que nous connoissons qui pourra en donner l'idée."

This "passion" was nearly as famous in Parisian society as the less legitimate flames of M^{mes} d'Houdetot or d'Épinay. When the prince de Beauvau was about thirty-five, a widower with one daughter, he began to frequent the salons of M^{me}

de Clermont, one of the most attractive hostesses in Paris, and a lady upon whose reputation even that scandalous age never ventured to reflect; their marriage did not take place till ten years later, when the mature age of the parties added to the piquancy of that rare spectacle, a pair of married lovers. Thirty years of conjugal felicity were followed, for the *maréchale*, by thirteen years of pious devotion to the memory of the departed: her regrets, it has been seen, are expressed with some elegance, and in excellent language; but after all the theme is monotonous, and it must be admitted that we do not read her reminiscences altogether for the sake of the excellencies of him to whom they are dedicated. Other witnesses represent the prince as somewhat cold and formal in manner, scrupulously honourable, with only moderate original talents, but of wide and cultivated intelligence. It was he who said, with the magnificent condescension of a *grand seigneur*, in addressing the Academy, that the king "voit avec plaisir les personnes de sa cour briguer dans cette compagnie l'honneur de *devenir les égaux des gens de lettres*." Two other anecdotes must complete the portrait. He was dangerously wounded in his first battle, and as he was being carried from the field, an officer stopped to pity "le jeune brave," as he was called in the army. He smiled, and replied by quoting the line—

"Et mes derniers regards ont vu fuir les Romains."

Some years later a French army was besieging Mahon, on the island of Minorca: wine was cheap, and it was found impossible to keep the soldiers sober. The prince de Beauvau suggested the publication of an order forbidding every soldier found drunk from joining in an assault for a week afterwards, and we are assured that drunkenness ceased like magic.

What distinguishes this book from so many other volumes of memoirs is that a single life is the thread which connects these last days of chivalry with the foundation and rise of the new order of things. The traditions of the *grand siècle* were in full force when the *maréchale* was young; she sat at the feet of Voltaire, and was so devout a "philosophe" that after her husband's death she refused even to regret "cette opinion consolante de la réunion dans un autre ordre de choses" which had not been his. In 1764 she signalled as remarkable a phrase in a parliamentary remonstrance, "l'opinion commande à la multitude, et la multitude commande à la force;" and after watching the first warnings of the coming storm, she lived to see it both break and spend itself. Another family memoir gives a very graphic description of the salon in which, true to her old habits, the *maréchale* used to receive her surviving friends under the Empire. Her dress was rich, but of ancient cut; the *cafetière* was gold, the china priceless; the lackeys aged and infirm, but with an air that said they had seen good society, and made their criticism a thing to be dreaded. The *maréchale's* voice was weak, and every one spoke low for courtesy; the company was mixed—some surviving philosophers converted to imperialism, some returned *émigrés*, one or two old and intimate friends. The new men came to give themselves an air of *ancien régime*, the Faubourg Saint-Germain came to show its liberalism, *M^{me} de Staël* came to admire the grand old lady who had been her father's friend: but the most welcome guests were still those who could talk about M. le *maréchal*, and encourage her in the pious hallucination that he was not wholly dead while she lived to preserve his memory. Marmontel describes her in his memoirs as "la femme qui a toujours raison," so perhaps we ought to believe on her authority that it was the fault of circumstances and the misfortune of France that the prince did not take a more conspicuous and influential part in public affairs. At any

rate the double chronicle of her constant affection and the life of her lord—it must be admitted that the two are mixed together rather perplexingly—makes a monument with which a greater man might be contented. H. LAWRENNY.

The Life and Labours of Mr. Brassey. By Arthur Helps. Bell and Daldy.

MOST eminent men never have their lives written at all; they are commemorated in the first instance by an amorphous collection of materials for a biography, and then by a series of *résumés* and reflections on the biography which has not been written. Mr. Brassey has escaped the common fate: no one can say that Mr. Helps has given us undigested materials instead of a book; yet he has not given us exactly a life of Mr. Brassey or a history of his labours. Instead he has written the *prolegomena* to a work which is hardly likely to be written, and, if it were, would find fewer readers than the pleasant sketch which he has given of Mr. Brassey's singularly winning character and of the conditions of his vast success. Mr. Helps in one respect was better qualified for his task than almost any writer; he has long been occupied with the problem of organization, and in approaching the life of a great organizer he knew at once what questions to ask. He points out very clearly how all the conditions necessary for the enormous development of railway enterprise had been gradually accumulated in England, and gives an interesting summary of the experience of Mr. Brassey and his agents, of the capacity and idiosyncracies of the workmen of different countries, with the result that the practical cost of labour scarcely varied, among extreme variations of the rate of wages. But the main interest of the book lies in what must have been the attraction of the subject to the writer, in the numerous illustrations which Mr. Brassey's career supplies of the homely wisdom which just evades being commonplace, and almost seems recondite because it is neglected, which has served for so many years to exercise the trained perception of *Friends in Council*. Perhaps the most striking fact is that Mr. Brassey's average profit on his contracts was barely three per cent.; the most edifying is that he seems to have owed his success much more to his character than even to his abilities, great as these were. There were many men who understood the business of railway construction equally well; but he was able to obtain the lion's share of it because he was peculiarly safe, and still more peculiarly pleasant to deal with, and because his good nature and judicious trustfulness enabled him to take work in a sense easily. It is seldom that optimists can point to such a splendid confirmation of the maxim that "Honesty is the best policy."

G. A. SIMCOX.

LITERARY NOTES.

The Russian government is said to be preparing to publish a complete collection of all autograph letters, orders, memoranda, &c. of the czar Peter the Great, including those of a private as well as of a public character.

The literary remains of the poet Bürger, which have hitherto been withheld from publication, and include letters and poems of considerable interest and value, have now, it is stated, passed into hands which give hopes of their soon being made accessible to the public.

From St. Petersburg we hear of the discovery, near Kertch, of a remarkable catacomb with walls covered with battle and hunting scenes: the sarcophagi are empty, but are supposed to be of Scythian origin, and to date from about the fourth century B.C. The frescoes give an exact representation of the dress

and accoutrements of a Scythian warrior, which in some respects resembled the old Russian costume.

The free-trade in light literature which the house of Tauchnitz does so much to forward will doubtless end by raising the standard of fiction throughout the inhabited globe, but just at first it gives rise occasionally to criticisms which have a very comical sound when they come back to the native country of writers who are prophets abroad. The *Allgemeine Zeitung* assures its readers that in *Wilfrid Cumbermede* Dr. George Macdonald "discusses the most serious and important life-problems without ever falling into a didactic tone, or becoming wearisome." The same reviewer admires the "Sprachgewandtheit" of a novelist for whose interpretation "even the best dictionaries leave us in the lurch." Did the reviewer try the *Slang Dictionary*?

The *Revue des deux Mondes* (August 15) prints some very pleasant letters from Admiral (then Commandant) Page to the wife of the Marquis de la Grange; they were written between 1844 and 1848, from various quarters of the globe, and express very much the feelings which a literary landsman would describe if he were trying to imagine himself in the position of a sailor. The singularity is, not so much that an active and able officer should have leisure for such emotions, but that he should be able to express them with as much ease and propriety as if they were unreal.

In a paper read before the American Philological Association, Mr. Trumbull gave a respectable Indian etymology for the much-discussed and much-abused word *caucus*. It comes from an Algonkin root, signifying "speak, encourage, instigate"; the least corrupted form of the word is *kaw-kaw-wus*, plural *kaw-kaw-wus-sough*, "caucusser," "counsellors, council"; the Virginians, out of the same word, made *cockarouse*, a name for the chief man in a tribe. As the settlers were fond of adopting native names for their political gatherings, the suggestion seems highly plausible.

We understand that Mr. Morris's early poems (not *The Defence of Guinevere*) will be reprinted about Christmas, with an equal quantity of new matter.

THEOLOGICAL NOTE.

Mr. Henry Dunn, in his last work (*The Churches an History and an Argument*; Simpkin, Marshall, and Co.), has carried the idea of Protestantism as purely individual Christianity nearer to complete logical development than any previous writer. He maintains that the Christian societies we find in the New Testament, though divinely organized, were provisional, and lost their *raison d'être* when inspired men had disappeared, and the inspired writings had been collected. Since then all associations between Christians exist only *jure humano*, and are most useful when we recognise that they are optional. The writer is a continuator of John Foster and of Isaac Taylor, the author of *Antient Christianity*. He spends much perverse ingenuity on the theses that the Lord's Supper was originally an household rite, and that Baptism is essentially a profession of faith, though there is some plausibility in the guess that there may have been a time when it was only administered to converts. The writer believes that the object of the Christian dispensation is to train the elect to take part in the subjugation and renewal of the world after the Second Advent; and that the object of the hierarchical organization of the church was to convert the world prematurely and superficially. So far as we can admit a deliberate change, the object was rather to fix and maintain the faith. Mr. Dunn insists, not without reason, that the traditional compromises inevitable in an organized society have to some extent lowered the Christian ideal, but he takes no account of the extent to which the standard of conventional propriety has been, and is being, raised, nor of the danger that, if everybody were left to make his own compromise with the ideas, the practice of half believers would be lower than it is. As the writer makes the personal union of the individual believer with the person of Christ the essence of Christianity, he ought in consistency to have rejected the traditional Protestant notion of the unique supremacy of Holy Scripture, as he has rejected the traditional Protestant notion of the sacramental value of

preaching. He is too unfamiliar with scientific investigations to put his views in a form to be enforced, or even seriously discussed; but he has a refinement and distinction of mind which are often the fruit of sustained and solitary earnestness, and these make what he says not unworthy of attentive consideration.

Art, &c.

THE DRAMA IN PARIS.

THE great heat has closed most of the Parisian theatres. The Comédie Française, however, remains open, and is giving several very interesting works, among which *Le Chandelier* of Alfred de Musset holds the chief place. This audacious but beautiful play was first performed in 1848 at the Théâtre Historique (now the "Porte St. Martin"), and transferred to the Française two years afterwards, where, after a few representations, it was forbidden by the censure. Now, however, its own intrinsic merit, and the talent of the actors who interpret it, seem to promise it a long and prosperous existence. The story is simple enough. A bold dragoon, Capitaine Clavaroche, is quartered in a country town. The café is dull, the theatre indifferent; he therefore turns his attention to his neighbours' wives, and wins the favour of Jacqueline, wife of the local solicitor, Maître André. The lovers are on the brink of discovery when the captain's somewhat dull intellect suggests to his mistress the idea of selecting a "chandelier:" that is, a young man who shall be admitted to her confidence up to a certain point, and no farther, so as to divert all suspicion from her real admirer. Her choice falls on the youngest of her husband's clerks, Fortunio, a boy of eighteen, who has long loved her in secret. The end is not hard to guess. Fortunio is generous and clever, Clavaroche selfish and dull—a difference which the lady is not slow to observe, and makes her choice accordingly. Of this work, rather a poem than a drama, Fortunio is the central figure. De Musset seems to have set himself to draw a boy of a generous, high-spirited character, in all the glow and ardour of his first love. His heart is full of a respectful passion for his beautiful mistress, whom he worships at a distance, as a being of another world: his joy knows no bounds when he thinks his love returned: he is broken down with wild anguish when he discovers why he has been tempted to think himself preferred: but in all his passionate outpouring of sorrow and reproach, there is no thought of mean revenge; she has broke his heart, but he loves her as truly as ever, and is ready to make any sacrifice to prove it. This difficult character is realised by M. Delaunay with singular ability. He is at least forty-eight years old, but manages to look and move as if he were barely eighteen, and even to infuse a certain boyish eagerness into his voice. The tone and manner in which he gives the long speech in which he muses upon woman's faithlessness and his own wretched lot is quite indescribable. It is a bitter cry of despair, coming straight from the depths of a generous heart, that has learnt for the first time that smiles may deceive, and vows be false. More admirable still, if possible, is the last scene, where he upbraids Jacqueline, less in anger than in sorrow, and faints away at her feet, worn out by his emotion. M^{me} Madeleine Brohan is a charming Jacqueline, and M. F. Febvre realises the rough sensual Clavaroche most completely.

The Orestes of Mounet-Sully, the young actor whose *début* at the Théâtre Français has been so successful, is unquestionably a remarkable performance. In the first place, it has brought four or five thousand people together twice a week to see one of the most stilted and dreary tragedies of the classical epoch, the *Andromaque* of Racine, which is of itself no small feat: and it raises them at times into genuine enthusiasm. One would like to know, however, whether any one has gone a second time! The actor is a strong, well-made, handsome young fellow—rather too fond, perhaps, of showing off his personal attractions, especially a pair of muscular and not ungraceful arms. He has been thoroughly well taught, and knows how to turn his lessons to the best account. The result is a performance of much vigour and intention, rising at the end into a stately pathos when Orestes, stung by the reproaches of Hermione after the murder of Pyrrhus, becomes mad. But from the beginning to the end the character is so unsympathetic that one cannot do more than admire the art, while one regrets the fustian on which it has been bestowed. From such a commencement it is impossible to predict the future. He may be a great artist, or he

may not. To tell him, on the faith of what he has already done, that he is a second Talma, as the French critics are doing, is as absurd as it is unfair to him. The result may be, if he is not wiser than they are, that he will rest contented with his first success, and make no further progress. He is to appear next in Corneille's *Cid*, and afterwards in one of Victor Hugo's dramas, either *Hernani* or *Marion Delorme*, probably the latter. Either will give him an excellent opportunity of showing what his real talents are. An adaptation of *Othello* is said to be also in preparation.

J. W. CLARK.

Paris, August 22.

ART NOTES.

A special commission was appointed under the Empire to report upon the Fine Art collections deposited in the museum of the Louvre, with a view to relieving the overcrowded state of these collections by making from them a selection of works which might be properly entrusted to other museums or to buildings of a sacred character. This commission has now finished its labours as far as they concern the paintings which are to be removed: the total number of which is, as stated by M. Charles Blanc in his report recently published in the *Journal officiel*, 885. Of these, 180 are of the Italian school; 50, of the Flemish and Dutch schools; and of the French, 655. The Italian are for the most part copies, or works of the second and third class; the same may be said of the Dutch and Flemish, and of a large proportion of the French. Where the works are attributed to a good name, it is invariably a doubtful attribution. As soon as these paintings have left the field clear by their departure for the provinces, the commission will proceed to attack the terracottas, ancient and modern sculpture, enamels, vases, and Egyptian antiquities. All the works purchased by the department of the Beaux-Arts at the recent Salon are to be submitted to the approval of the public before distribution.

M. Champfleury is about to publish his *Souvenirs et Portraits de Jeunesse*. The volume will contain a biography of Courbet, of Bonvin, and others, the materials for which have been furnished by letters and personal intimacy.

Henry Trappes, who is well known by his etchings, and chiefly by his illustrations to *Gil-Blas*, recently committed suicide, it is said in despair at some family complications. He was hardly thirty-seven years old.

The great exhibition at Milan opened on August 26. The artistic congress held in connection with it took as its principal question for debate the teaching of drawing in so far as it may be made a portion of primary instruction. The inauguration of the monument erected by the Milanese to Lionardo da Vinci took place on the 28th.

The École des Beaux-Arts is making rapid steps towards importance amongst the museums of Paris. As soon as the library was commenced, M. His de la Salle presented to it a hundred drawings selected from amongst the most valuable in his collection. M. Gatteaux also bequeathed all his books, his drawings and engravings. M^{me} Bertin has now enriched the collection by the gift of eighteen drawings which were accounted amongst the finest of those which figured in the posthumous exhibition of her brother's works, the last of the French landscape painters who held by the traditions of Poussin, and, it may be added, of Francisque Millet.

The first half of the second volume of Andresen's *Handbuch für Kupferstichsammler* has just appeared. It has been edited and completed since the death of the author by J. E. Wessely. The two other unfinished works left by Andresen, viz. *Der Deutsche Peintre-Graveur* and *Der Deutsche Malerradierer des 19. Jahrhunderts*, have also been undertaken by the same writer.

It is said that the architects Bohnstedt, Kaiser and Grossheim, Ende and Böckmann, Mylius and Bluntschli, have been invited to take part in the final competition for the German Houses of Parliament. Their new plans are to be sent in April 1, 1873.

Hans Makart, Alma Tadema, August Pettenkofen, Franz Defregger, Oswald Achenbach, and Caspar Zumbusch, are on the list of those recently confirmed as honorary members of the Munich Academy of Fine Arts, by the king of Bavaria.

The *Zeitschrift für bildende Kunst* for August 9 contains an article on "Barbarian Types depicted by the Ancients," by Professor Conze, illustrated by a lithograph from a marble supposed by the writer to be the portrait of a German woman, now preserved at St. Petersburg in the Hermitage.—Carl Justi concludes his essay on Philipp von Stosch and his time; and Bode's notes on the artists of Haarlem also come to a close.—H. Ludwig ends his paper on the uses of petroleum in oilpainting.

In December 1862, Herr Oberstlieutenant Pfau of Winterthur came into the possession of one of the many repetitions of that composition of Raphael's which is well known by the name of the Madonna di Loretto. The apparent merit of this particular example has caused a claim to originality to be put forth on its behalf. The grounds on which this claim may be supported, together with much interesting matter relating to the history of the painting in question, will be found in a little book entitled "*Die Madonna von Loretto*—eine kunstgeschichtliche Untersuchung von S. Vögelin," published at Zürich in 1870.

The death of M. Charles Duron has just taken place at Paris. M. Duron, born in 1814, at Pont-à-Mousson, was a distinguished artist in enamel. Some of his happiest works became the property of the Marquis of Hertford, and of Baron Rothschild.

Professor E. Magnus, born at Berlin, 7th January 1799, has just died there at the age of seventy-three. Professor Magnus was a pupil of Schlesinger, whose valuable studies after the Sixtine Madonna he recently presented to the print room of the Royal Museum. He especially excelled in portraits; nearly all the princes and notabilities of Germany have been painted by him. His portraits of Jenny Lind, of the Countess de Rossi-Sonntag, and of Mendelssohn, were exhibited at the Paris Universal Exhibition in 1855.

The jury for the Berlin Goethe memorial have awarded the three prizes offered, to the sculptors Adolph Donndorf, of Dresden, Fritz Schaper, and Rudolf Siemerling, of Berlin. These three artists are invited together with Alexander Calandrelli to take part in a final competition.

Oberlieutenant Joseph Reiter, commandant of the fortress of Klissa, in Dalmatia, has been named corresponding member of the Institute for Archaeological Correspondence at Rome, as a grateful testimony to the services rendered by him in the preservation of two Roman sarcophagi in the neighbourhood of Salona.

The largest and most important of the fragments of the carved column dug up by Mr. Wood, on the supposed site of the temple of Diana at Ephesus, has been set up in the Graeco-Roman room at the British Museum. It measures about 6 feet in height, and 18½ feet in circumference; and is supposed to have formed a portion of the first drum of one of the thirty-six Ionic carved columns which, with ninety-one others, supported and adorned the edifice. Portions of the base and capital of the column were found close by (*Academy*, vol. iii. p. 285). On the side of the drum there are five figures which, though not without intrinsic merit, derive their chief beauty from the admirable architectural intention which is manifested in the treatment and grouping. All are more or less mutilated, but there are sufficient indications to identify one as Mercury, and another as Victory.

A new bust of Mr. Gladstone is on view in the great hall of the Reform Club. It is by Mr. J. D. Crittenden, whose "Christ anointing the Eyes of the Blind" was one of the works in the sculpture room of this year's Royal Academy exhibition.

In repairing the roof of Dumfriess House, Ayrshire (formerly the property of the Earls of Kilmarnock, but now in the possession of the Marquis of Bute), some workmen discovered two half-length portraits rolled up, and hidden in the rafters. On

examination one proved to be the portrait of the Earl of Kilmarnock who was executed for rebellion in 1746; and the other after some difficulty was identified as that of John Drummond, Earl of Melfort, outlawed in 1694. These portraits had been removed from their frames and hidden away in consequence of the political peril formerly attaching to their possession. Another portrait of Drummond, engraved and published by Vanderbanc, was named, not Melfort, but Lundin, Lady Melfort's family name—the name of Melfort being tabooed.

A collection of original drawings by William Blake has been sold recently by Messrs. Sotheby and Wilkinson. The collection consisted of—the set of twelve illustrations to Milton's *Paradise Lost*, which fetched 100*l.*; the set of eight illustrations to Milton's *Comus*, 20*l.* 10*s.*; the set of six illustrations to *The Hymn*, 53*l.* On the same occasion, an early drawing by W. Hunt, "The Cottage Door," 41*l.*, and "Childe Roland," by Burne Jones, 42*l.*, were also disposed of. To the same firm was entrusted the sale of the valuable library of Mr. André Knox, which took place August 14 and five following days. One of the most interesting of the many fine illuminated MSS. which were then disposed of was *Horae Beatae Mariae Virginis*, 4to—a beautiful MS. of the fifteenth century, on vellum, with thirteen large paintings, every page ornamented with borders of great elegance in design, capital letters, &c. This volume was formerly in the possession of Samuel Rogers, who attributed the work to Oderici, the contemporary and friend of Giotto and Dante, and it contains an MS. note in Mr. Rogers' hand. It is bound in morocco, with the cypher of Charles II., of whose collection it once formed part, stamped on the back and sides. 98*l.* Messrs. Sotheby also disposed of the collection of coins and medals of the late Wm. Jackson, of Lancaster. Some of the most valuable pieces were the following:—a gold octodrachm of Ptolemy III., 26*l.*; an octodrachm of Ptolemy V., 29*l.*; of Ptolemy VIII., 24*l.*; a pattern five-piece of George III., by Pistrucci, 21*l.*

New Books.

- BIBRA, Ernst v. Alte Eisen- u. Silberfunde. Archäologisch-chemische Skizze. Nürnberg: Richter u. Kappler.
BÖTTICHER K. Von dem Berliner Museum. Eine Berichtung an A. Conze in Wien. Berlin: Ernst u. Korn.
POUV, F. Les Faïences d'origine picarde et les Collections diverses. Amiens: Lenoel-Hérouart.
SEIDL, Fr. Xav. Dichtungen vom Morgenlande. Nach e. Orig.-Inscr. bearb. Regensburg: Forchhammer.

Physical Science.

The Morphology and Physiology of Plants. [*Botanische Abhandlungen aus dem Gebiet der Morphologie und Physiologie.* Herausgegeben von Dr. Johannes Hanstein, Prof. der Botanik an der Universität Bonn.] 1870-1871.

[SECOND NOTICE.]*

IN turning to the memoirs, two of which form the subject of the present notice, the first relating to the development of the Embryo in Phaenogams, the second to the structure and fructification of Diatoms, it will scarcely fail to be remarked that where the subjects are at all cognate, much advantage will be derived from reading them in connection. Indeed, as the paper on the development of the radicle by Reinke was prepared under the express supervision of Dr. Hanstein, the author of the important memoir with which the series was opened, and which now comes under revision, the two may almost be considered as emanating from the same source, and I have no hesitation, from my own experience, in stating that Reinke's observations are an excellent preparation for the full understanding of his superintendent's larger and more important dissertation. Undoubtedly the whole is well worth a careful study, but no one point seems to me of greater interest than the development of the embryo of Brachypodium, because it completely settles the theory which was originally broached by Richard

as to the nature of the organ called by him vitellus, and which I confess that I had long considered as true. If this is regarded as the primary radicle, the subsequent ones being all adventitious, Gramineae are placed in the same category as other Monocotyledons, in the greater part of which the primary radicle is evidently exorhizal. On following out, however, the gradual development of the embryo from its earliest stage, it becomes quite evident that the first rootlet is endorhizal, and that the so-called vitellus is really an absorbent portion of the cotyledon. This is, in fact, in accordance with what takes place in some palms, the onion, and other cases, where a portion of the cotyledon remains in contact with the albumen long after the development of the radicle and plumule, deriving nourishment from it for a considerable time, while the development of the embryo of Brachypodium is almost exactly like what occurs in *Tropaeolum*, where even the suspensor can readily be traced in the ripe seed just at the point of germination, and where the real primary radicle bursts through the hood (Haube) exactly as in Brachypodium. The nomenclature adopted by Reinke, though somewhat complicated, is really of value in indicating the true relations of the several parts of which the descending axis is composed.

As regards the second memoir, on Diatoms, by Dr. Pfitzer, we have in it a full confirmation of the important observations which were made by Mr. Thwaites† before leaving England for Ceylon, and which at once settled the question as to the vegetable nature of these singular organisms. The point of especial interest in the paper is the elucidation of the mode in which the two portions of the outer siliceous envelope overlap each other, thus facilitating the multiplication of the individual as distinct from the fructification. Few matters are more interesting as regards microscopical observation than the mode of propagation, and where the different species of *Biddulphia* can be readily procured as on our southern coasts, they will afford ample food for many a morning's investigation. The two original halves remain exactly *in statu quo*, and it would be interesting to know how long they would subsist while new intermediate frustules are developed; and the same observation applies to many Desmidiaceae. It is much to be wished that these very useful and important memoirs should receive such encouragement as may ensure their continuance. The Ray Society would do well to include them in the number of their acceptable translations. M. J. BERKELEY.

Notes of Scientific Work.

Geography.

Central Africa.—The whole of the geographical information contained in the numerous letters written by Dr. Livingstone and safely brought home by Mr. Stanley, has by this time been sifted, and as the great traveller has turned back into the mysterious central land of Africa, our knowledge of his accomplished work will in all probability remain at its present stage for a long period. Until the explorer shall himself appear to confirm or correct what he has given us, the geography of equatorial Africa will rest on Livingstone's own data. The discussion by geographers at the British Association and elsewhere, of the outlines of information thus vouchsafed, has wrought great changes in the accepted hydrography of the land. Before these letters arrived, it was believed that the Nile had a main tributary at least in the Tan-

† The whole subject of Cryptogamy is deeply indebted to Mr. Thwaites for the patient investigation he was able to devote to it before leaving England. Amongst other matters, his memoir on the gonidia of Lichens in *Annals of Nat. Hist.* ser. ii. vol. iii. p. 219, will be read with interest, as anticipating those of Schwendener in *Nägeli's Journal*, though taking a far more rational view of the subject than that which supposes that Lichens are Fungi parasitic on Algae. Cohn has lately called in question the justice of Schwendener's views in the *Botanische Zeitung* (March 1872); but he is wrong in supposing the threads in Palmellae are always extraneous. A comparison of Mr. Thwaites' observation on *P. botryoides* in the same journal (vol. i. p. 312), as confirmed in *Berk. Furr. to Crypt. Bot.* p. 399, will be sufficient to show the connection of the threads and spores. A similar structure prevails in the gonidioid cells of the anomalous genus *Emericella*, *l. c.* p. 341.

* See *Academy*, vol. iii. pp. 188, 189.

ganyika Lake and its feeders far south of the equator; for a connection had been traced on apparently good grounds between this basin and the Albert Lake and the Nile by an outflowing river. The Chambeze-Lualaba of Livingstone with its lakes might also, so far as our information then went, prove to be the head of the Nile, though probabilities were in favour of its being rather the headstream of a river flowing westward. We learn now from Livingstone and Stanley that the Tanganyika is not in the Nile basin; its outlet (for being a lake of perfectly fresh water, it must have an outflow) is not to the Nile; but it is highly probable that its discharging river is the Lufiji, on the east coast. Moreover, taking Livingstone's own measurement of the level of the great Chambeze-Lualaba system that he discovered, at its furthest point, the river could not be the Nile, for it is here exactly the same height above the sea as Gondokoro, known to be on the Nile, 800 miles away. The Lualaba could not join the Albert Lake, as it lies upwards of 500 feet above the given elevation of the river, not to mention the very mountainous country of Ulegga, spoken of by Speke, Baker, and Livingstone, which intervenes to prevent it. Dr. Schweinfurth's explorations, carried on contemporaneously with those of Livingstone in Manyema, by tracing the rivers forming the Bahr-el-Ghazal to their sources, have shut off the only inlet which seemed possible to Dr. Livingstone himself. The conclusion is evident that Livingstone, though searching for six years with this object in view, has never once seen the Upper Nile at any point. It has been suggested that a great inland lake may receive the waters of the Lualaba, but such a continental system in the equatorial forest region of Africa, saturated by double rainy seasons, is a physical impossibility. Any lake in this belt must overflow. The only outlet on the west coast, capable of discharging such a volume of water as that accumulated by the Chambeze-Lualaba and its lakes, is the Congo; and the second conclusion forced upon us is that it is the Upper Congo river which the great traveller has now made known.

Upper Nile.—The results of Dr. Schweinfurth's latest remarkable journey in Dar-Fertit in the beginning of 1871 are fully described in the current part of *Petermann's Mittheilungen*. In former journeys Dr. Schweinfurth had explored and mapped out the source country of the Rohl, Tonj, and Jur tributaries of the Nile rising westward of Gondokoro. These rivers flowing northward unite in the Bahr-el-Ghazal, which joins the Nile above the ninth parallel of north latitude, and have hitherto been considered as the chief streams of this lateral system. In his last journey, however, the traveller, by going westward, has crossed the upper streams of a river named the Abu Dinga, which he identifies clearly with the Bahr-el-Arab, a tributary of the Ghazal formerly considered to be of small importance, but now proved to be the longest and largest branch of the Bahr-el-Ghazal system.—Ernest Marno, a traveller in Upper Sennar, has sent to Gotha a full report of his journeys in this region during 1870–71, and a most valuable map, which it is said will add greatly to our knowledge of the territory of the Abyssinian Nile. His letter from Khartum of the 6th December 1871 brings the following intelligence:—Great political changes have recently taken place; Jaffar Pasha has been deposed from the ruling power in Sudan; Muntas Pasha has obtained the government of the districts of Khartum Fashoda (Bahr-el-Abiad), and Sennar; Kordofan, Taka, and Dunga, with Berber, have each received a separate ruler. The government recently seized upon a number of slave boats, and slaves to the number of from 3000 to 4000 were brought to Khartum. No provision having been made for such an influx, the greater number died within a few days. Muntas Pasha had not arrived, the remaining officials did not trouble themselves in the matter, and soon the dead lay before every house and all along the river banks, a fearful epidemic among the settled inhabitants being the result.—The most varied reports are in circulation respecting Sir Samuel Baker's expedition, but this at least is certain, that he is still (in Dec. 1871) at Jebel Redjef, not far from Gondokoro. In consequence of the great number employed, the expedition encountered great obstacles, that increased as it advanced into the less known country; the troops have been so greatly reduced and demoralised by sickness and hunger that it is the opinion in Khartum Baker must soon return.

Western Mongolia.—The active exploration by the Russians during the last few years of the geography of the region of Mongolia lying next to their Siberian possessions, and the establishment of new relations, political and commercial, with these countries, would lead us to suppose that the annexation of these lands to the great empire is seriously contemplated. A very important map of this region accompanies the last part of *Petermann's Mittheilungen*. It is based on Klapproth's map of Central Asia, which was drawn from the surveys made by the Jesuit missionaries of Pekin by order of the emperor Khian-loung, and upon that of M. Veniukov which accompanied the seventh number of the *Izvestija* of the Russian Geographical Society for 1871; but the map is filled in and greatly amended from the journeys of the Russian travellers Schischmarev (1864–65), Palinov, and Matusovski (1870), containing besides a reconstruction of the routes of Prinz (1863) and the artist Atkinson, so far as they bear upon this part of Asia. These tracks cross Mongolia in sufficiently various

directions to form a trustworthy basis on which the detailed topography of this inner Asiatic plateau may now be accurately laid down.

Morocco.—Though formerly little visited by Europeans, this country has of late attracted many explorers, as the names of Rohlfs, Gubernatis, Balanza, Beaumier, Lambert, Gatell, Blackmore, Hooker and Ball abundantly testify. The French military expedition under General Wimpffen from Algeria to the Wady Gir in Morocco, during March, April, and May of 1870, also form the subject of an essay in the *Mittheilungen*. The primary object of this undertaking was the dispersion of the armed bands that harassed the people of the Algerian Sahara, the most powerful of which, the tribe of the Dui-Menia, had their home in the Wady Gir, not far north-west of the oasis of Tafilet. The map accompanying the paper, in which the line of march of this expedition is seen almost to join the route made known by Rohlfs in 1861–1864, shows that great gain to geography has also resulted.

An *Abstract of the Reports of the Surveys and of the other Geographical Operations in India for 1870–71*, just issued, contains an interesting chapter on recent geographical exploration. In continuation of his plan for systematically exploring the countries beyond the British frontier, Major Montgomerie despatched a trained Pathan Havildar of Sappers direct from Peshawur to Faizabad, the capital of Badakshan. This interesting tract of mountain land between the Indus and the Kabul rivers, bounded on the north by the Hindu-Kush and Mustagh ranges, had been sealed to all attempts at exploration. The Havildar crossed over from Yusufzai into Swat, went thence to Chitral, then up the lofty and difficult Nakshan pass to Zebak on the Upper Kokcha, and descended the valley to Faizabad. He fixed the positions of the Nakshan and Dora passes, and took latitude-observations at five points. His route survey is 286 miles in length, and has opened out 13,000 square miles of hitherto unknown country.—During the autumn of last year, Mr. Blanford, of the Geological Survey, examined the eastern and northern frontiers of British Sikkim, reached the Donkia pass, 18,500 feet above the sea, ascertained the position of another pass never before marked on any map, discovered three unmapped lakes, and made a good collection of birds.—Our knowledge of the geography of Persia has also received valuable additions. Captain St. John, after co-operating with Col. Walker in determining the longitude of Tehran, has fixed the latitudes of places between Shiraz and Tehran, correcting an error of ten miles in the position of Kashan, and has completed a survey of the Elbourz Mountains. Meanwhile Major Lovett has made a journey from Shiraz to Kerman and Bam, and corrected the position of Niviz, an important place at the eastern extremity of the valley of Persepolis. From Niviz the road traverses a pass, 5,640 feet above sea-level, over the range of Loivez hills, a mountain-chain requiring thorough geographical and geological exploration to its termination near the shores of the Persian Gulf. Beyond these hills is the desolated valley of Kotro stretching away in a direction south of east, with no visible limit. Major Lovett travelled thence to Khairabad, at the foot of the Tung Chal, a granitic range, and, crossing at an elevation of 8000 feet, reached Kerman. He then journeyed north-east to Khabis, and corrected the mistaken position of this place on Pottinger's map. Khabis, the terminus for kafilahs proceeding across the deserts to and from Seistan or Meshed, abounds in fruit, including eleven kinds of *Aurantiacae*. The surveys of St. John and Lovett have furnished valuable materials for a new map of Persia.

The *Zeitschrift der Gesellsch. für Erdkunde zu Berlin*, No. 38, contains an elaborate paper by Dr. Neumayer on the exploration of the South Pole. He has prepared a full *résumé*, extending over fifty pages, of the literature of the subject, illustrated with a very good map, and given the details of a scheme which he laid before the Geographical Congress at Antwerp for prosecuting a further exploration of that region. He proposes that it should be combined with an expedition to observe the transit of Venus, and, starting from the Cape of Good Hope, and making the M'Donald Group head-quarters, should endeavour to push on from Kemp's Land toward the pole. The essay has since been published in a separate form.

Physiology.

The Influence of the Central Nervous System upon Animal Heat.—A very interesting essay on this subject containing the results and details of many experiments has just been published by Dr. Franz Riegel in *Pflüger's Archiv für die gesammte Physiologie* (No. 12). Dr. Riegel first repeats and corroborates the generally known fact that division of the spinal cord in the neck, opposite the sixth cervical vertebra, is followed by a steadily progressive diminution of temperature. The cause of this fall of temperature might be attributed to paralysis of the vasomotor nerve, leading to dilatation of the vessels and consequent increased evaporation and exposure of the blood to the cooling influence of the air; or it might be due to this cause, combined with diminished production of heat within the body of the animal; or, lastly, it might be due to a proportionally increased loss of heat, though the production of heat be augmented. Riegel set himself to determine which of these

views is correct. For this purpose, control experiments were requisite on every point: on the effects of chloroform and of morphia injection; of keeping the animal in a warm room; of binding it; of the frequency of the respirations, which are greatly diminished by section, &c. He agrees with Tschschichin that there is no increased internal development of heat after section of the cord, and that the fall in temperature is to a certain extent due to the dilatation and increased evaporation from the cutaneous vessels. But he even goes beyond this, and considers that there is an absolutely diminished production of heat in an animal after section of the cord, and that all his experiments favour the view that the application of heat to the peripheric cutaneous nerves constitutes an excitation which travels centripetally to the respiratory centre, and acts reflectorally upon it. The healthy animal possesses in this reflectorial excitation of the respiration a highly important heat-regulator, and it is consequently easily intelligible why the external application of heat, if this regulator be not annulled, causes no rise of temperature in the healthy animal. This reflectorial increase in the rapidity of the respiration explains why other observers in their researches on "the effects of external heat" have observed no increase of temperature in uninjured animals. Division of the spinal cord removes the channel the more perfectly the higher the section is made.

The Gases of the Blood.—MM. Mathieu and Urbain contribute to Brown-Sequard's *Archives de Physiologie* (No. 2) the results of their enquiries into this subject, especially in regard to the proportion of gas contained in the blood of different arteries. The researches of Claude Bernard have shown that the quantity of gas contained in venous blood varies with the condition of activity or of repose of the organ whence it proceeds. Though the greater or less amount of oxygen absorbed by the tissues explains these variations very well, a second interpretation has been proposed, namely, that the diminution of oxygen in the blood is due to intra-vascular oxidation taking place at the expense of the blood itself. On this view the oxidation which is well marked in the veins commences in the pulmonary capillaries, and continues in the arteries, causing a gradual disappearance of the oxygen, the loss attaining its maximum in the veins. As a consequence of this, the arterial blood does not everywhere present the same composition. MM. Estor and St.-Pierre actually concluded from their experiments that whilst the blood of the carotid contained 21.06 per cent. of oxygen, that of the crural artery contained only 7.62 per cent., so that 13.44 per cent. of oxygen disappears in the course of a second or two; the authors attribute this sudden change to the occurrence of incessant intra-vascular oxidation. MM. Mathieu and Urbain's experiments may be divided into two groups: first, those in which the proportion of gas contained in the blood of arteries of nearly equal diameter was compared; and, secondly, those in which that from arteries of different calibre were examined. As regards the former, they found that no remarkable difference could be detected between the carotid and crural artery: in one case, for example, the proportions were for the carotid, oxygen 20.45 per cent., nitrogen 1.64 per cent., carbonic acid 48.18 per cent.; and for the crural, oxygen 18.03 per cent., nitrogen 1.60 per cent., carbonic acid 44.23 per cent., the slight difference being due to the effect of the first bleeding. On the other hand, in comparing the blood of large with that from small arteries, the amount of oxygen in the former was invariably greater than in the latter, the difference sometimes amounting to 3 per cent.

The Anatomy of the Spleen.—W. Wedl, in a paper contained in the *Sitzungsberichte der Wiener Academie*, vol. lxxv. pt. 1, observes that it is not difficult to inject the veins of the spleen, and exhibit the venous ramifications by the corrosive method. When the spleen of a sheep is thus treated, the following appearances are seen:—Each main vein with its dilatation receives branches opening into it peripherically, and these again receive numerous branches from certain intermediate spaces. These branches are sometimes so minute that they can only be discerned with a lens. The angle of entrance of each set of vessels into the larger ones is nearly the same, as well as the distance from one another, so that a branch resembles a small cone beset with prickles. He was unable to discover the venous plexuses or anastomoses described by W. Müller. Another mode of examination he adopted was to fill the vessels with coloured solution of gelatine, and then to harden this with alcohol, which process allows of fine sections being made. At the points where the veins present constrictions, processes may be seen by this means to pass into the cavity of the diverticula of the veins. These processes are of two kinds: one a papillated inflection of the venous wall; the others are trabeculae forming incomplete septa. Wedl found, as Gray and Frey have done, no venous rootlets within the Malpighian corpuscles. As regards the epithelium demonstrated by Billroth in the delicate veins of the pulp, Wedl always found it complete, never discontinuous, as stated by Frey. His investigations show that the blood path is also continuous, the blood passing from the arteries into capillaries, and thence into veins, and not at any point through lacunae of the tissue.

On the Coagulation of Fibrin.—A. Schmidt (*Medicinisches Centralblatt*, No. 16) finds that, in blood drawn from the living vessels, a

ferment originates from the action of the blood corpuscles which causes the coagulation of fibrin. The material for the fermentation is afforded in the fibrinogenous and the fibrinoplastic substances, which must be simultaneously exposed to the action of the ferment in order that the fibrinous coagulum may be formed. The action of the blood corpuscles upon the fermentation process is dependent on the haemoglobin, though other substances that condense oxygen upon their surfaces and catalytically decompose peroxide of hydrogen act in the same way, such as spongy platinum, carbon, &c. The transudates found in the cavities of the dead body for the most part contain the two fibrin generators, but no ferment, and they will coagulate on the addition of the ferment. In some the fibrinoplastic substance is absent, and requires to be added before coagulation will occur. Neutral alkaline salts and low temperatures arrest the process. To obtain the ferment, the albuminous substances of the blood must be coagulated by maceration for fourteen days in concentrated alcohol; the fluid is then filtered, and the residue on the filter dried at a low temperature, pulverised, and extracted with glycerine.

The Structure of Striated Muscle.—Four papers have recently appeared upon this subject: one by J. H. L. Flögel, in *Schultz's Archiv*, viii. 69; a second by W. Dönitz, in *Reichert und du Bois-Reymond's Archiv*, 1871, 434; a third by G. Wagnier, in the *Marburg Sitzungsberichte*; and a fourth by F. Merkel, in *Schultz's Archiv*, viii. 244—discussing the structure of the primitive muscular element of Articulata. Flögel gives a description of the muscles of a species of Trombidium (a small arachnid, of which the common minute red spider of gardens is an example), and states they are composed of a series of compartments divided from one another by septa which from wall to wall contain: (1) a simple and feebly refracting substance, which strikes a slight tint with perosmic acid; (2) a granule which, with its neighbours on either side, forms the granule layer, and is strongly stained by perosmic acid; (3) another layer identical with the first; (4) the double and strongly refracting substance which becomes deeply stained with the acid; (5) the same as the third layer; (6) the same as the second; and (7) as the first.—Merkel agrees with Flögel in considering that the fibres of muscle are divided into compartments (Muskelkästchen) by transverse septa.—Dönitz, on the other hand, returns to the old view that the primitive morphological element of the muscle is the fibril and not the compartment. His researches appear to have been chiefly made on the Crustacea.—Wagnier admits the existence of Hensen's intermediate stria, but adds that there are from two to eight secondary ones which are constantly present, but are very fine. He describes the act of contraction in the following terms. The anisotropic and doubly refractive substance, with the intermediate stria of Hensen and the adjoining striae, contract and approximate to one another, and then the two isotropic and singly refracting striae, originally separated by the broad anisotropic band, become so compressed together that they are only separated by a single feebly marked line.

Anthropology.

Etruscan Antiquities found in Belgium.—A Belgian antiquary, M. H. Schuermans, calls attention (*Bulletin de l'Académie royale de Belgique*, p. 528) to certain objects found in a tomb at Eygenbilsen, north of Tongres, in 1871, viz. (1) a fillet of gold; (2) a cylindrical cista of bronze; and (3) an oenochoe of bronze, with the figures of two fabulous animals confronted on its neck. There appears to be no doubt that the articles in question are of an Etruscan character. But it is very rash on the part of M. Schuermans (as his critics, MM. Roulez, Wagnier, and de Witte point out, *ibid.*, p. 513) to conclude that they must have found their way from Etruria into Belgium previous to the displacement of the original Celtic population by the Germanic race which Caesar found in possession of the district where the recent discovery took place, seeing that his argument relies on a series of combinations which are anything but satisfactory. In the first place, it is not just to take the statement of Caesar (*Bel. Gall.* i. 1) with regard to the Belgians generally *minimeque ad eos saepe mercatores commeant*, in the sense of *nullum aditum esse ad eos mercatoribus* afterwards (ii. 16) applied by him to the Nervii, a tribe which despised the rest of the Belgians for their submission to the Roman dominion. And if it were just, there is no difficulty in supposing a relaxation of the laws against foreign traders after Caesar's time. The fault of this supposition, however, is that it does not fall in with M. Schuermans' notion of the high antiquity of the articles about which he writes. In the second place, the passage of Livy (v. 33) refers to the supremacy of the Etruscans by sea and land up to their decisive defeat by Hiero I. of Syracuse, B.C. 474, and has nothing to do with the spread of their wares north of the Alps, while the passage of Pliny (xxxiv. 16) concerning the *signa tuscanica* to be met with in various lands applies to statues, not to utensils, and moreover need not be taken as referring to so very early a period, or as including Belgium in the "various lands." In the third place, the fact that in Greece solder was in use instead of rivetting in bronze work as early as the fifth century B.C. cannot be relied on to prove that the bronze cista (No. 2), in which rivets have been employed instead of

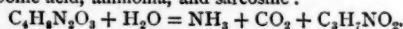
solder, was made previous to the fifth century B.C. For the artists of Etruria, and more especially the workmen, we should suppose, took very few hints from the Greeks, even in later times of greater commerce. But after all, there are many who give good reasons for believing that the objects looking like Etruscan found of late years in great numbers north of the Alps—notably at Hallstadt, in 1868—and also conspicuous for the absence of solder in the bronze work, are really ancient productions of the native workmen of the countries where they are found, owing their resemblance to objects found in Etruria, both in manner of manufacture and style of decoration, to a common inheritance of skill and taste which the southern nations developed more quickly. In that case we should be still less surprised if a Greek invention of the sixth century B.C. did not reach the native workmen in distant parts of Europe till after Caesar's time.

Excavations at Mzchet.—If Fr. Bayne has hit upon the right way of accounting for the uniform presence of not less than three skeletons in one sarcophagus in the ancient tombs of Mzchet, near Tiflis, he will have contributed a valuable commentary to the statement of the geographer Strabo concerning the practice of sacrificing human beings which existed among the natives of that district in his time. In any case, the report on the excavations among these tombs, the first instalment of which is given in the *Zeitschrift für Ethnologie*, part iii. 168, will prove an important addition to our knowledge of the condition of ancient civilisation in that quarter. Distinguishing the sarcophagi of the native Iberians from those of the Greek residents, he describes the former as of two classes in point of size, the smaller containing always three skeletons, the larger more than four, usually six, skeletons. The rule with regard to the smaller sarcophagi is to find them containing one grown person decked with ornaments of gold and pearls, and accompanied by two children with ornaments of bronze of a rude pattern. In cases where the two companion skeletons are of larger make, the ornaments are still of this common material and pattern. In the larger sarcophagi, on the other hand, there is a marked absence of ornaments throughout, from which Bayne concludes that the tenants must have been ordinary victims sacrificed to the gods, while with respect to the triple occupation of the lesser sarcophagi, he considers that the two secondary persons—generally children—had been sacrificed in token of grief at the decease of the central and conspicuous person. The most appalling result of his researches is that the victims appear to have been buried alive. The sarcophagi which he ascribes to the Greek residents contain only one skeleton, beside which, in one instance, he found a bronze mirror, such as the tombs of Kertsch usually yield, and an engraved onyx with a Greek name inscribed on it.

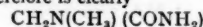
The Engis Caves.—These caves, where Schmerling carried on such successful explorations, have been further examined by E. Dupont, who has laid his report before the Académie royale des Sciences de Belgique (*Bulletin*, No. 6). He found a human ulna, and bones of *Ursus spelæus*, *Rhinoceros*, *Sus scrofa*, *Equus caballus*, *Cervus tarandus*, *Cervus elaphus*, and *Bos primigenius*. A great number of flint implements were also met with of a form resembling those from the caverns of Sureau and Magrite; drawings are given of some from the second cave in which Schmerling found the human skull.

Chemistry.

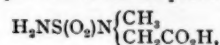
The Origin of the Urea of the Animal Body.—Schultzen showed some time since that certain nitrogenised substances, containing but one atom of the element, are converted in the animal body into urea, and suggested that the final oxidation-products of the amidated acids, of leucine, glycocine, &c., may be either bodies of the cyanogen group or carbamic acid. If animals yielding a uniform amount of urea be given glycocine or leucine, they secrete an increased amount of urea exactly corresponding to the nitrogen of the leucine or glycocine supplied to them. The objection could of course be raised that the increase of urea arose from the substance introduced acting like a fever-poison. Though no symptoms of fever were observed, to meet this difficulty, a substitution-glycocine was chosen for the experiment, methyl-glycocine or sarcosine being preferred. According to a recent paper (*Ber. Deut. Chem. Gesell. Berlin*, No. 12, 578), if a well-nourished dog be given, in addition to his ordinary food, the amount of sarcosine the nitrogen of which corresponds to that of the urea daily secreted, urea and uric acid disappear altogether from the urine, and are replaced by a series of new and definitely characterized bodies, the examination of which cannot fail to explain as yet unknown normal processes of interchange of matter in the animal organism. One of the substances is obtained by the author's method as the acid of a baryta salt; the other, which forms brilliant tabular crystals, has the formula $C_4H_4N_2O_3$; when heated with baryta solution in closed tubes, it splits up into carbonic acid, ammonia, and sarcosine:



Its rational formula therefore is clearly



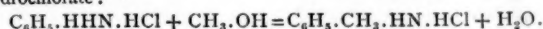
and it may be regarded as a urea the two atoms of hydrogen of one atom of nitrogen of which have been respectively replaced by methyl and acetic acid, or as a sarcosine in which the group $N(CH_3)H$ has the H replaced by the group NH_2CO of carbamic acid, NH_2COOH . The author traces the formation of the new body to the combination of sarcosine and carbamic acid with separation of water. The acid body combined with baryta was found by analysis and a study of its behaviour when heated with baryta to have the composition



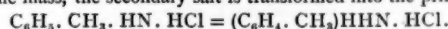
that is, of a compound of sulphamic acid with sarcosine minus water. Here then is the sulphamic acid of the bodies, albuminous and gelatinous, which the sarcosine has met, and which under normal conditions is transformed into sulphuric acid and ammonia, the latter combining with carbamic acid to form urea. It is a point of no little interest to know the form in which the sulphur is contained in the complex bodies of these two classes. Under normal conditions fowls convert the greater part of the nitrogen of their food into urate of ammonia; when plentifully supplied with sarcosine, however, they fail to secrete any uric acid, and produce new and definite substances, the characters of which are now under investigation. The details of this interesting research are to appear in the *Annalen der Chemie*.

Analysis of a Bronze Celt.—The implement in question, one of many found at Salzberg, near Halstatt, has been examined by E. Priwzownik, of the Vienna Mint (*Annalen der Chemie*, clxiii. part 3, 371). It was remarkable for having a crust of a reniform or botryoidal structure, and an indigo-blue colour; being from 5 to 7 mm. in thickness, diminishing near the edge to 2 mm., and weighing nearly 100 grammes. On the inner side the crust was in some places coated with a thin layer of bright green basic carbonate of copper. The first or outer, and in fact the chief, layer is very brittle, and has a fracture which, when fresh, exhibits an imperfect metallic lustre and a distinctly radiate structure; the streak is very deep blue, almost black. It is composed of 33.22 per cent. of sulphur, and 66.77 per cent. of copper, being in fact covelline (CuS), to which mineral it likewise bears the fullest resemblance as regards specific gravity and other physical characters. The second layer, found only in certain portions of the crust, is separated from the first layer with difficulty; it has a blackish-grey colour, is about 0.5 mm. thick, and consists of copper-glance (Cu_2S), through which is disseminated about 15 per cent. of tin. This metal, it will be remarked, is not present in the outer layer. The third layer, sparsely distributed, consists of a black powder composed of 59.8 per cent. of copper-glance, 23.2 per cent. of tin, 3.4 of water, with traces of antimony and nickel. The unchanged bronze of the Halstatt weapons was shown by v. Schrötter to have the composition: copper, 90-92 per cent.; tin, 6.5-9.0 per cent., and traces of six other metals, which traces have been detected in the several parts of the crust. It follows then that this crust is due to a direct chemical change of the bronze, and not to deposition from without. The tin and the other metals appear to have moved from without inwards as the alloy became broken up on the conversion of the copper into sulphide by soluble sulphides or gases containing sulphuretted hydrogen. The author has succeeded in covering fragments of antique bronzes with a layer of blue copper sulphide by long treatment with yellow ammonium sulphide. The presence of zinc as a constituent appears to prevent copper alloys from undergoing this change. Knop ascribed the formation of covelline to the decomposition of copper pyrites, by oxygen and water containing carbonates, into carbonate of iron and copper-glance, and the production of covelline and copper oxide from the copper-glance by the continued action of those reagents. The author's view of the formation of this mineral has the advantages of being less intricate, and of deriving support from direct experiment.

Conversion of Aniline into Toluidine.—This has been accomplished by A. W. Hofmann (*Ber. Deut. Chem. Gesell. Berlin*, 13th August, 720) in the following manner:—By heating one molecule of aniline hydrochlorate with one molecule of methylic alcohol for many hours at 230° to 250° , there is formed a yellow transparent resinous mass of the consistency of honey, consisting for the most part of methylaniline hydrochlorate:



If the tube be now heated for a day to 350° , it undergoes a complete change. The transparent viscous fluid is converted into a beautifully crystalline mass, the secondary salt is transformed into the primary:



The solid mass is almost completely soluble in water, and by treatment with alkali liberates the base as a brown oil, which, when distilled in an atmosphere of steam, solidifies in the receiver into a brilliant white mass of toluidine, the melting-point of which is 45° . In this reaction but few by-products are formed. Aniline hydriodate furnishes a liquid toluidine. The author intends to attempt the formation in a similar way of homologues of the amines of other classes, and of some of the

bases occurring in the organisms of plants. One of the by-products of the action of heat on trimethylated phenylammonium iodide is a beautifully crystallised hydrocarbon melting at 136° , and boiling between 230° and 240° . It gave the formula $C_{12}H_{18} = C_6(CH_3)_6$, and is supposed by the author to be benzol, the whole of the six atoms of hydrogen of which have been replaced by methyl. If it be so, he considers that the oxidation of such a compound will yield products worth investigation.

Fall of Aërolites in France.—The *Compt. rendus* of the 29th July contains a note from M. de Tastes, addressed to the Academy of Sciences, and presented by M. Sainte-Claire Deville, describing the fall of an aërolite in the neighbourhood of Lancé, in the canton of Saint-Amand, Loir-et-Cher. At 5^h 20^m, Tours mean time, on the 23rd July a brilliant meteor passed over a spectator stationed between Champigny and Brissay towards the north-east in the direction of Tours. It presented the appearance of a spear of flame with two spheres of fire of an orange colour; the track of one seemed to incline downwards, that of the other to proceed straight forward, the whole appearance becoming somewhat more luminous at the instant a slight divergence of the course of these two spheres was first seen. It was lost to sight behind a cloud near Sainte-Maure, and an explosion was heard at 5^h 26^m. Many observers affirm that they heard two distinct explosions very near together, others noticed but one; all testify to the appearance of two meteors pursuing nearly the same path. A meteorite fell in a field near Lancé, and passed a metre and a half through the light soil into a bed of marl. It weighs 47 kilogrammes; some fragments separated by the fall were found near it.—In the last number of the *Compt. rendus*, for the 5th August, is a note by M. Daubrée recording the more recent discovery of a second meteorite at Pont-Loisel, 12 kilometres south-east of Lancé. The line joining the two localities coincides with the direction of the trajectory of the meteors, and the Pont-Loisel stone, though much smaller (it weighs 250 grammes), bears the closest resemblance as regards mineral characters to the Lancé stone. The smaller stone fell first—a circumstance observed in former showers—and penetrated the soil to a depth of only half a metre.

Conversion of Tartaric into Racemic Acid.—M. Jungfleisch announced at a meeting of the *Société chimique* held last month that tartaric acid may be almost completely transformed into racemic acid by heating it in a closed vessel at 172° to 175° for a dozen hours (*Revue scientifique*, 28th July, 68). He exhibited several hundred grammes of racemic acid prepared by this method, and established its identity by a careful examination of the racemates.

Writing from Florence to a recent number of the *Ber. Deut. Chem. Gesell. zu Berlin*, H. Schiff reports the progress made since 1867, in the publication at Turin, of the *Enciclopedia chimica*, edited by T. Selmi, of Bologna. This great work is arranged very much after the form of the first edition of the *Handwörterbuch* of Liebig, Wöhler, and Kopp, and five quarto volumes of it have already appeared, embracing about 1000 pages and bringing it down to the letter F. The articles on theoretical and organic chemistry are by Schiff, Sestini, Paternò and others, those on technical chemistry by Arnaudon, of Turin; many are said to exhibit a completeness hardly met with in German works of the kind. Some indication of the degree in which the *Enciclopedia* is appreciated in Italy is shown by its boasting over 2000 subscribers.

The directorship of the new laboratory at Rome has been offered to Dr. Hugo Schiff, who will however remain at the Florentine Institute, which has been even more richly endowed by the Italian parliament than the institution at Rome, the charge of which has been undertaken by Prof. Cannizzaro.

New Publications.

- ANDERSSON, C. J. Notes on the Birds of Damara Land and the adjacent Countries of South West Africa. Van Voorst.
- BALTZER, E. Der Mensch inmitten der Natur. Leipzig: Dürr'sche Buchhandlung.
- BOUVIER, C. Pharmakologische Studien über den Alkohol. Berlin: Hirschwald.
- BRÜCKE, E. Studien über die Kohlenhydrate und über die Art wie sie verdaut und aufgesaugt werden. Wien: Gerold's Sohn.
- CZERNY, V. Ueber die Beziehung der Chirurgie zu den Naturwissenschaften. Freiburg: Wagner'sche Buchhandlung.
- GEIKIE, J. On Changes of Climate during the Glacial Epoch. London: Trübner.
- GRÄBER, V. Vorläufiger Bericht über den propulsatorischen Apparat der Insekten. Wien: Gerold's Sohn.
- HUMBOLDT, Alexander v. Eine wissenschaftliche Biographie. Im Verein mit R. Avé-Lallement, J. V. Carus, A. Dore etc. bearb. und herausg. von K. Bruhns. Leipzig: Brockhaus.

- LEITGE, H. Zur Morphologie der *Metzgeria furcata*. Graz: Leuschner und Lubensky.
- MÄDLER, J. H. v. Geschichte der Himmelskunde. 1. Band, 6. und 7. Lieferungen. Braunschweig: Westermann.
- NAGEL, E. Der natürliche und künstliche Schlaf. Wien: Ficht.
- SEIDLITZ, G. Die Parthenogenesis und ihr Verhältniss zu den übrigen Zeugungsarten im Thierreich. Leipzig: Bidder.
- STRASSBURGER, E. Die Coniferen und die Gnetaceen; eine morphologische Studie. Jena: Dabiz.
- ZENGER, K. W. Der Differentialphotometer. Prag: Grégr und Dattel.

History.

Contributions to the History of the Literature of the Times of Thököly and Rákóczi, 1670-1735. By M. Koloman Thaly. [Adalékok a Thököly-és Rákóczi-kor Irodalomtörténetéhez.] Pest: Ráth.

THESE two volumes refer to that interesting portion of Hungarian history known as the *kurucz világ*—an expression which we may perhaps be allowed to translate by "insurgent world." The word *kurucz* is derived from the Latin *crux*, and the name was first applied to the peasants who in 1514 were collected by the pope's legate for a crusade against the Turks, but turned their arms against the nobles. This name was assumed by the insurgents, mostly peasants or members of the lowest sections of the nobility, and almost exclusively Calvinists, who in 1672 rose against the intolerable fiscal oppression and religious persecution practised by the lieutenants of the emperor Leopold I. The assumption of the name *kurucz* pointed to an essential distinction between this insurrection and the political wars of religion that had filled the earlier part of the seventeenth century. In these earlier wars the political classes had taken the initiative, and reasons of statecraft and the interests of the princes of Transylvania had limited the extent and duration of the warlike operations. On the other hand, the insurrection of 1672 was—at any rate in its beginning—a popular movement, excited by oppressions affecting the lower classes of society. Hence the revival of the word *kurucz* of demagogic memory. With varying fortunes, and under diverse leaders, the insurrection continued until it culminated in the expulsion of the Germans out of the whole of Upper Hungary by Thököly. He was recognised by the sultan as vassal king of Upper Hungary, and the vezier in 1683 proceeded to lay siege to Vienna. The defeat of the Turks by Sobieski and Charles of Lorraine (*tringyiai Károly*) involved the ruin of Thököly. In vain did his heroic wife, Zrinyi Ilona, defend the rock of Munkács for more than twelve months. The Turks were slowly but steadily driven out of Hungary. Transylvania submitted to the rule of the house of Habsburg. Thököly was interned, a helpless exile, in Asia. A series of victories had laid Hungary at the feet of Leopold the "Great." Not only the fear they inspired silenced opposition, but a large part of the nation felt that the expulsion of the Turks was a benefit so great as to counterbalance many evil deeds on the part of the German government. Under such circumstances it was natural that the old oppressions should be repeated by the foreign—German and Italian—agents of Leopold, to end in the same result. In 1703 a second *kurucz* insurrection broke out in the same part of the country as the first—along the banks of the upper Tisza. Prince Francis Rákóczi II., son of Zrinyi Ilona by her first husband, was placed at its head. The expulsion of the Turks from Hungary, which at first seemed to render the prospects of the insurrection doubtful, really enabled it to assume more formidable dimensions, as it spread over the whole country from the north-eastern

Carpathians to the frontiers of Styria and the banks of the Drave. So strictly *kurucz* was it in its origin that the first officers of the insurgent's army were swineherds, barbers, tailors, &c., elected by the peasants themselves. Nor was it until he had achieved several successes that Rákóczi received the adhesion of the nobles, who but gradually and a few at a time joined his standard. After many successes and reverses, the exhaustion of the country, the wiser and more conciliatory spirit of Leopold's sons, and the success of the allies against Louis XIV., Rákóczi's ally, put an end to the insurrection in 1711. One of Rákóczi's lieutenants, Alexander Károlyi, a man of great ability and prudence, negotiated for the insurgents the Peace of Szatmár, which closed the long period of internal wars which had wasted Hungary with but slight intermissions for more than a century and a half. The character of the warfare then waged is incidentally revealed by such words in the Hungarian language as *hajdu*, *katona*, *szegény legény*, which have fluctuated between the meanings of "soldier" and "robber," and it is repeatedly alluded to in the present collection, especially in the *labancz* or anti-*kurucz* pieces. The leading spirits of the insurrection, Rákóczi and Bercsényi, however, refused to recognise the treaty, and betook themselves to the hospitality of foreign sovereigns, the Czar of Muscovy, the King of France, the Sultan of Turkey. In 1735 Rákóczi died in exile at Rodosto, on the shores of the Sea of Marmara, leaving behind him a name which, in spite of his want of ultimate success, or perhaps on account of it, has enjoyed a larger measure of posthumous fame than any other in Hungarian history.

Such is the period which the lamented historian, M. Szalay, himself spoke of as the most interesting and instructive in the history of his country, but death put an end to his labours before he had completed his account of the times of Rákóczi. In its investigation and illustration M. Thaly, mindful, as he tells us, of the maxim, "*ars longa, vita brevis*," has already spent the spare moments of twelve years. During this time he has examined nearly a hundred and fifty public, family, and private archives. The results of his researches have appeared in his *Life of Blind Bottyán*, one of Rákóczi's generals, and several other historical works relating to the "*kurucz* world." While carrying on these investigations, he kept in view not only what is still considered by many in its narrowest sense history, the record of wars, battles, negotiations, administrative measures, &c., but also the literature of the times, revealing more or less clearly the degree of culture attained by the nation or individuals, the passions and the beliefs which sustained them during the long internecine struggle. The result is the two volumes before us, the first containing the poetry illustrative of the insurrection of 1672 and the career of Thököly, the second that illustrative of the insurrection of Rákóczi.

As long ago as 1864 M. Thaly had conceived the plan of this present work. In the preface to his collection, entitled *Old Hungarian War-songs and Elegies*, published in that year, he stated that the pieces of a later date than 1670 had been reserved with the view of publishing all relating to the "*kurucz* world" in a separate collection. In like manner he has excluded from the present work all pieces of a later date than 1735, the year of Rákóczi's death. At present, to judge from his preface, he does not see his way to publishing a collection of them. In 1864 he had collected about sixty or seventy *kurucz* poems, but he deferred their publication from two motives. Not only did he entertain hopes—now happily fulfilled—of rendering the collection more complete, but the police regulations relating to the press—M. Schmerling being then in the height of his power

—would have rendered the publication of such "rebellious" literature difficult, not to say impossible. Since 1864 the collection has been augmented not only from MS. in public and private archives, but also by an extensive correspondence with and personal enquiries from all sorts of persons who might be supposed to have any knowledge of the subject—descendants of *kurucz* leaders, surviving members of old bands of gipsy musicians, and the like. In Hungary, as elsewhere in Europe, the conviction prevails that the old world is definitively passing away, that now, if ever, must be collected the wrecks of tradition which have withstood the assaults of time, but are fast disappearing before the railroad and the common school. Not the least interesting or instructive reading in the two volumes before us is afforded by the history given of each piece, its preservation, and its discovery. M. Thaly writes on this subject with a genuine enthusiasm which perforce communicates itself to the reader. As the most striking instance in point, we would refer to the account given (ii. pp. 227-241) of the scarcely suspected survival of the original music of the *Rákóczi-nóta* down to the present day.

The collection itself is sufficiently miscellaneous. With the exception of two dialogues out of the *Actio Curiosa* (noticed in the *Academy*, vol. ii. p. 473), sixteen unpublished letters of the poet Gyöngyösi, a Latin cento on the Diet of Szécsény, and two Latin hymns, all the pieces are in verse and in the Hungarian language. Most of these Hungarian poems express the sentiments of the *Kuruczok*, a few those of the *Labanczok*, or partisans of the Habsburgs. The larger number, including those of the greatest value as historical documents, are popular poems composed by uneducated or half educated men, but the collection also includes poetry written by persons of culture, illustrating not merely the struggle but also the ideas then entertained about literature. We have a good number of the unflinching loyalist Count Koháry's long-drawn effusions, lamenting his undeserved misfortunes—he was for three years a prisoner in the hands of Thököly—in a monotonous strain of somewhat provoking self-complacency. By way of contrast we have one specimen given us of the unpublished poems of Petröczy Kata-Szidonia, the wife of the *kurucz* leader, the last Count Pekry. It is marked by pathos and "distinction," but the versification has that monotonous character so general in the Hungarian verse of the seventeenth century. The most important from a literary point of view is an abridged version of a hitherto unpublished poem, 499 stanzas in length, on the marriage of Thököly and Zrinyi Ilona. It has neither title nor name of author, but is evidently written by a contemporary imitator of Gyöngyösi. The latter poet, be it observed, was a steady adherent of the *labancz* cause. The foot-notes elucidating the allusions in the text are very useful, but occasionally there ought to be more of them. The spirited piece in the second volume (pp. 121-128) which describes the state of Kolozsvár when besieged by the *kurucz* army is composed in a style so terse as to be often obscure. And surely there must be many Magyar readers who will not understand the strange jargon of the Slovak insurgent in vol. ii. p. 376. The two volumes form a valuable addition to our knowledge of the period, and mark a long step towards the composition of a regular history of the *kurucz világ* which M. Thaly half promises us.

ARTHUR J. PATTERSON.

Heimskringla, eller Norges Konge-sagaer, af Snorri Sturlasson. Udg. ved C. R. Unger. Christiania: 1868.

THE *Heimskringla*, or *Lives of the Kings*, written by the old Icelandic historians, exist in miscellaneous collections of

sagas, and in various redactions. Chronologically they fall under two heads, the *mythical* and the *historical*; and among the historical we may again discern between the "epic historical," written from oral tradition, treating events from bygone times, and the historical in the modern sense, or those written and recorded by contemporary writers.

The mythical period ends, and the dawn of history begins, shortly before the time of the settlement of Iceland, about the time of King Harold Fairhair and his father Halfdan the Black. Whatever is recorded to have happened before that time falls within the mythical age, extending from Odin downwards to the middle of the ninth century. The two centuries next following make up what may be called the Saga age, the time of the early historic sagas, marked by two great events—the settlement of Iceland, the Orkneys, the Faroes, and a century later by the introduction of Christianity. Then comes the purely historical time, when events and writing run parallel.

The Lives of the Kings may be divided thus. The mythical age is comprehended in the brief *Ynglinga Saga*, containing a pedigree of kings from Odin, accompanied by brief notes on each king, his death, his cairn, intermingled with various interesting mythical anecdotes. The historical series of kings then begins with King Harold Fairhair and his father Halfdan the Black. In the ancient works and MSS. we may divide this series into three parts: (1) *The Life of King Harold*, the ancestor of all future Norse kings, with the lives of his sons and nearest successors, kings and earls, within the heathen age, including the end of the ninth and the whole of the tenth century; these sagas only exist in an abbreviated form. (2) Then follow the *Lives of the two Olaves* (*Ólafanna Sögur*), King Olave Tryggvason and St. Olave, *Ólafs-Saga-Tryggvasonar* (995–1000) and *Ólafs-Saga-Helga* (1014–1030). These two kings were the champions of the Christian faith, much celebrated in song and story, and of each there exists accordingly an elaborate historical account. (3) Lives of the following kings: Magnus the Good and Harold Hardrada, and his successors down to King Sverri, including about 150 years (1030–1180); King Harold is the last in the list whose life still bears the mark of the epic and early saga style, although his time borders close on the age of writing, for the first Icelandic historian, Ari (see *Academy*, vol. i. p. 278), was born only a year after his death, and this historian, Ari, was the very man who, among other works, laid the foundation of the *Lives of the kings of Norway*, in a work variously called *Konunga Efi*, *Konunga-bók*, or *Konunga Sögur*. Among the kings of the twelfth century there was no eminent man, and their sagas are accordingly devoid of much interest until the appearance of King Sverri, 1177–1202, of whom there exists a separate saga, a highly interesting and well written history (*Sverris Saga*); the saga of his grandson, King Hakon († 1263); his son was King Magnus the Law-minder († 1281), whose life (now lost, with the exception of a fragment) is the last saga written by an Icelandic sagaman on a Norse king. Thus counting from Harold Fairhair, we have an unbroken series of above 400 years, a period almost exactly coinciding with the existence of the Icelandic commonwealth.

Now, as to the work commonly called *Heimskringla* (the name is modern, taken from the beginning words "Kringla heimsins," the *Circle of the world*); this work contains a recension of the *Lives of the kings of Norway* down to King Sverri; first comes a preface, including a brief record of Ari, the historian, whose book formed the groundwork; then the series of the sagas themselves, beginning with the *Ynglinga Saga*, the *Heimskringla* being the only recension that has preserved that saga to us; for all the other recensions begin with King Harold Fairhair (the *Fagrskinna*,

with his father Halfdan the Black). The *Lives of King Harold* and the next following kings, King Hakon (the foster-son of King Athelstan), and the sons of Gunhild, are here given in a fuller and better form than elsewhere. It is succeeded by the saga of Olave Tryggvason, much abbreviated in shape as compared with the large *Ólafs Saga* contained in the Arna-Magn. vellum, folio 61, and published in *Fornmanna Sögur I.–III.*, as also in *Flateyrbók*; yet the abridgment is done with a careful hand, evidently by a historian, not, as is the case in some of the following, by a mere abridging, unskilled transcriber. The *Ólafs Saga Helga* (St. Olave) conforms in the main to the special saga of that king, published in *Fornmanna Sögur IV. and V.*, but especially it agrees closely with the text in the edition of 1853 from an old Icelandic vellum in Stockholm. The sagas of the following kings are given in an abridged text, and mostly by an unskilful hand, especially in the sagas of the kings of the twelfth century; and we may add that the texts of the various MSS. of *Heimskringla* vary here among themselves, transposing, adding, and omitting, so as to produce an almost hopeless confusion. The best and fullest text of all these sagas from Harold Hardrada downwards to Sverri, is contained in another ancient Icelandic vellum called *Hulda* (Arna-Magn. folio 66), and published in the sixth and seventh volume of the *Fornmanna Sögur*. The *Heimskringla* ends abruptly in the year 1176; but only in a single MS., the parent of our vulgate text; for the other vellums run on, and also give an abridgment of the *Sverris Saga*, as well as of the *Hákonar Saga*, down to 1263, some comprehending but one, some both those sagas.

The author of this work is in the editions and in all later writings said to be Snorri Sturlason, born 1178, died 1241, the famous writer of the *Edda*; but curiously enough, neither the MSS. nor the tradition attest this; the only vellum that says anything about the matter is the *Cod. Fris.*, which begins thus: "here beginneth the Book of Kings according to the records of Ari, priest, the Historian." The first mention of Snorri, as compiler of the *Heimskringla*, occurs in a Danish (or Norse) translation of it by a certain Lauriz Hansson of 1550 (Arna-Magn. 93, and autograph); he says: "as it is recorded in the preface of Snorri Sturlis (*sic*), the Norse historiographer;" and "here endeth the preface of Snorri Sturlesenn in the Book of Kings." This statement was repeated in a later translation by the Norwegian priest Clausen (1599), whose translation was published by Ole Worm (a Dane) in 1630. The most learned Icelandic scholar of that time, Arngrim the Learned, was himself unaware of the fact, for in a letter to Ole Worm of 1632 (Aug. 18), he says: "quod ad Snorronem nostrum, an vestrum potius, quibus lucem et se ipsum profundá oblivionis nocte debeat;" "as to our Snorri, or rather *your* Snorri, for to you (the Danes, not to us Icelanders) he owes both the light and the deliverance of himself out of a deep night of forgetfulness." The fact appears nevertheless to be substantially true. If not the *Heimskringla* in its present shape, yet the *Life of St. Olave*, as it stands in the edition of 1853, is the work of Snorri; his authority is once quoted in regard to the battle of Swolder (where Olave Tryggvason fell), and the reference quoted agrees with the text in our *Heimskringla*. Graver doubts may exist as to his authorship of the last part, namely, the sagas of Harold Hardrada and the rest; if he ever was the composer of those sagas, his work would be more likely to be the text of the *Hulda* (our best text), and not the badly compiled abridgment which is given in our texts of the *Heimskringla*.

But Snorri was not the original compiler of these records; neither could he have been, for at his time the tradition of events that had happened in the tenth century had greatly,

if not altogether, faded away in Iceland. But there were other sources:—

I. The *Book of Kings*, or *Lives of Kings*, by Ari, a book which appears to have existed as a separate work, but was at a later time inserted (abridged?) into his *Islendinga Bók* (see *Academy*, I. c.); this *Book of Kings* is lost, but we can often penetrate to it and perceive it through the veil of the works of later historians; in the chronology, and chiefly in the choice records as to heathen rites, sacrifices, customs, and manners; in the genealogies, which we owe to Ari's authority; &c.

II. The next sources were the old poems (war-songs), but however rich in words and circumlocution, they were but poor in facts.

III. The large collection of episodes and sagas of Icelanders who had lived in Norway in the times of the respective kings, received honours there, and now that they returned, the incidents of their lives were handed down shaped into a little tale; those episodes the Icelanders call "thættir" (twists of rope), distinguishing them from the longer sagas; they were told and re-told at festivals, meetings, banquets, weddings, at the evening winter-hearth, and at length written down. A large collection of such episodes, rich and varied in scenes and characters, is embodied into the Sagas of the Kings (thirty, forty, or upwards), and forming sometimes the choicest part of the narrative. The saga of Harold Hadrada, e.g. and that of Olave Tryggvason, are for a great part made up of these small stories, which inform us, not of the king's public life and career, nor even of his dealings with his subjects in Norway, but of his audiences and intercourse with the Icelandic visitors in Norway (e.g. the *Tale of Stuf the Blind* in the saga of King Harold).

IV. As to the *Lives of the Kings* next preceding Sverri, there was a work written by an Icelander, Erik Oddson; that book was called *Hryggjar-Stykke*, a record, mostly authentic, of the events in Norway immediately after 1130; this work is lost, but it is the groundwork of the complete saga as found in the *Hulda* and in the *Morkinskinna*.

Most of the ancient vellum MSS. of the *Heimskringla* were preserved in the old University Library at Copenhagen, and were consequently all destroyed, together with the library, in the great fire of 1728. These vellums were:—

1. The *Kringla* (also called *Cod. Acad. Primus*). This famous vellum is the foundation for all the editions (with one exception), and it has given the name to the book itself. It was nearly a complete copy, only the first leaf with the preface was wanting, and the corresponding leaf, the eighth and last in the quire; it therefore began with the first chapter of the *Ynglinga Saga*, where the words "Kringla" or "Kringla heimsins," from which the name is derived, occur in the first sentence. This vellum seems to have been written in the year 1266. 2. The next vellum was by Torfaeus called *Jöfraskinna* (*Membrana Regum*), also called *Cod. Acad. Secundus*; it did not end as the former MS., but ran on into *Sverris Saga*, the end being wanting. 3. The third was by Torfaeus called *Gullinskinna* (*Golden-skin*), *Membrana Aurea*, from the brilliancy of its writing and parchment; it only contained the latter part, beginning with the life of King Olave the Quiet (1067–1093), and ran on through *Sverris Saga* and *Hákonar Saga*, where it ended, being defective. Although these vellums were destroyed, they have been preserved in a transcript by the well-known vellum-transcriber, Asgeir Jónsson. The learned Icelandic historian Thormod Torfaeus was at the end of the seventeenth century engaged by the king of Denmark to compile the *Historia Norvegiæ*, the *Series Regum Daniæ*, the *Winlandia*, the *Orcades*, &c., until

in consequence of an unlucky accident (a manslaughter), for which see *Hist. Eccl. Isl.* iii. 570, 571, Torfaeus fell into disgrace with the king, who exiled him to Norway, to the island Karmten, in Bergen-Stift; here he lived during the remainder of his long life for about fifty years, far off from the vellums in Copenhagen. He therefore had all these vellums copied by Asgeir, the Icelandic vellums of the Royal Library as well as those of the University Library; the Arna-Magn. Library did not yet exist. Among other things all the vellums of the *Heimskringla* were copied, precious fragments of the *Orkneyinga Saga*, and much besides; and a happy accident it proved to be, for when in 1728 the library with the originals was consumed by fire, these accurate transcripts were preserved, all in the possession of Árni Magnússon, who had bought them at the death of Torfaeus in 1719. The transcript of the *Kringla* is contained in three volumes (Arna-Magn. 35, 36, and 63), and that of the *Jöfraskinna* in Arna-Magn. folio 37. The first edition of the work, published in Sweden in 1697, before the fire, is founded throughout on the *Kringla*, but not so the folio edition of 1777–1783 and its later reprints, of which the third part is founded not only on a different MS. but even on a different recension; and for this reason:—In making the catalogue of the Arna-Magnaean MSS. (in 1731), the third and last volume of Asgeir's transcript had by inadvertency been separated from the rest, and placed under No. 63. This circumstance was unknown to the editor, and it was noticed by the present writer when ten years ago the collection was removed from its old place in the Round Tower into the New Library building at Copenhagen. The present edition is throughout founded on the same MSS. (Arna-Magn. 34, 35, 63), and is consequently the first real true edition of the work presenting oneness in the text.

The present edition originated thus. It was originally intended to be edited by the late Prof. P. A. Munch; but at his lamented decease in 1863, the work, which seems not even to have been begun, was transferred to the present editor. It is a commendable work in every respect, especially in the philological parts, in which the editor has endeavoured to give the chief peculiarities of the spelling of the *Kringla*: e.g. the double use of the *ö* (*o* and *ø*), answering to the double sound of that vowel. The transcripts of Asgeir are accurate in the text and meaning, but seldom in spelling; but some few pieces exist in Árni Magnússon's own handwriting, and he was the most accurate man both in text and in spelling. We may here add a fact which has escaped Prof. Unger, viz. that besides those pieces which Prof. Unger has given in the preface as existing in Árni's hand, there also exists a fuller evidence as to the spelling of this old vellum. The *Kringla* wound up with a "List of Poets" (*Skálda-tal*), following the series of the kings, and adding in parallel columns the names of those poets (*skálds*) who composed songs on each of the kings; this last part of the *Kringla* is preserved in a separate transcript executed by Árni himself (Arna-Magn. No. 761, qto.), and is printed (but not yet published) in the third volume of the Arna-Magn. edition of the *Edda*, pp. 251–269, following letter for letter the spelling of the old vellum. By the aid of this List we are also enabled to fix the age of the MSS.; for it has the name of King Hakon, with Sturla the Lawman as his poet; this poem was composed in 1264 or in 1265, shortly after the king's death. The List, on the other hand, omits the name of King Magnús, his son, on whom the same poet composed many songs, for which he received honours, as stated in *Sturlunga Saga*, iii. 306.

Prof. Unger's preface gives a good account of older editions, especially that of Peringsköld, and of the way in which

modern pieces and additions from other sagas have crept into the text. All this is now weeded out, and the book is a handsome edition; at the end there are indices of names—of proper names and of local names—all done in a satisfactory and unpretentious way. GUDBRAND VIGFÚSSON.

DRACO NORMANNICUS.

I AM not aware whether the periodicals have at all noticed the recent rediscovery of a document by no means unimportant for the medieval history of England, but appearing to have been lost for a number of years.

Montfaucon (*Bibliotheca Bibliothecarum Manuscriptorum nova*, i. 41, 1739) was the first who mentioned as the contents of MS. Reg. Christ. 1267: "Anonymi *Draco Normannicus*, versus continent historiam Mathildis Imperatoris Francorum Anglorum et Normannorum, quaedam ibi habentur de synodis sub Victore et Alexandro III." Afterwards J. J. Brial, well acquainted with this notice, printed from a volume of abstracts of MSS. belonging to the queen of Sweden, which he found in the library of St.-Germain-des-Près, part of the introduction in verse, as well as the prose headings to the several books and chapters of the work, in *Notices et Extraits des Manuscrits de la Bibliothèque du Roi*, viii. 2, 297, 1810. He asserted at the time that, when he enquired for the MS. in the Vatican through the academicians, M. La Porte du Theil, and Cardinal Dugnani, late papal nuncio in France, the book was not to be found. Brial is of opinion that Stephen of Rouen, a monk of the abbey of Bec in the twelfth century, was probably the author of *Draco Normannicus*, a poet of whom verses in a similar style are preserved in a MS. of St.-Germain, and about whom there is an article in the *Histoire littéraire de France*, xii. 675. Brial's extracts and conjectures concerning the authorship are repeated by Sir Thomas Duffus Hardy, *Descriptive Catalogue of Materials relating to the History of Great Britain and Ireland*, ii. 297, 1865.* It appears that the MS. was not forthcoming when the late Record Commission sent emissaries to the continental libraries, though I happen to know that Dr. Pertz much about the same time obtained a copy with the purpose of printing it in the *Monumenta Historiae Germanicae*. At length it turns up again in print, and at a place where not every sharp-sighted enquirer would readily look for it, viz. in *Appendix ad Opera edita ab Angelo Maio S. R. E. Presbytero Cardinali continens quaedam scriptorum veterum Poetica, Historica, Philologica ex codicibus collecta*. Romae apud Josephum Spithoever M.DCCC.LXXI. 4^o. As the editor, Joseph Cozza, Monachus Basilianus, is altogether silent about the long disappearance of the volume, one can only guess that Cardinal Mai, who died in 1854, kept it a good long time by himself. And nobody thought of it until sixteen years after his death it is published, together with some other of his transcripts, in the same slovenly manner by which the learned men of the Vatican have latterly distinguished themselves. In a few scanty words, not altogether free from suspicion (p. 20), the reader is informed that the poem after all did not belong to the collection of Queen Christina, but that, after some vicissitudes, it is preserved in an Ottobonian MS., viz. Vat. 3081. Moreover, it turns out to be a paper copy, and consequently neither very old nor the original of an author of the twelfth century. There is, however, a notice at the end (p. 65 of the edition), saying, "Libellum istum sumpsit ex quodam *perno*" (= *parvo*, says the editor) "*antiquo libro, quem mihi concessit R. M. R. B. Et erat ille liber ut credo de Ab. de B. H.*" (Bec-Hellouin?). Not a word is added about the age of the handwriting or the paper. The work contains in print 4346 verses, exclusive of three gaps after v. 1439, v. 1629, and v. 3007, in each of which places a leaf equal to a hundred verses has been torn away. The editor, who has added a few flimsy notes mixed up with the glosses which are written on the margin of the MS., is also to be blamed for having suppressed the opening of the Prooemium under the pretence: "quia nihil historicum, nihil non vulgare habebat" (p. 21). He consequently begins with the same words as Brial's extracts: "Dum moror in studiis," &c. Lastly, he has arbitrarily distributed the prose

headings or titles, which in the MS. stand by themselves over the whole poem, inserting them wherever he thought fit.

In spite, however, of the late date of the MS. and the bad editorship, a careful perusal must convince every scholar that he has not to deal with a supposititious forgery, but unquestionably with a composition of the twelfth century. Though distichs were not frequently selected for an historical poem, the imitation of Ovid is not altogether unusual in medieval historiography. I may refer to Ermoldus Nigellus and his contemporary work: *In honorem Hludowici Christianissimi Caesaris Augusti* (Louis le Débonnaire), printed in Pertz, *Scriptores*, ii. 467; and in every respect much nearer the Norman poet, to the *Carmen de bello Hastingsensi*, by Guido of Amiens, supposed to be nearly contemporary with the event, and printed for the first time in *Monumenta Historica Britannica*, i. 856. There is not much to be said for our author's talent as a writer of verse. Like all writers of Latin verse in Gaul since the days of Venantius Fortunatus, he is fond of an accumulation of epithetic terms and synonymous verbs, which adds neither to poetical nor metrical correctness and beauty, e.g. v. 231:

"Sublimes, humiles, fortes, castos, sapientes
Obruit, extinguit, comprimit, arect, habet."

For the sake of his verse, he sins occasionally against grammar and syntax. There is little of the poet in him, but decidedly more inclination to reason about historical facts and their connection. He makes his heroes, Pope Stephen III., William the Conqueror, King Henry II., and others, deliver long speeches on given occasions.

The chronological arrangement of the work, evidently written in honour of the empress Matilda and her son, King Henry II. of England, is rather involved and full of episodes. Happily the author adheres in this respect to the programme which he has prefixed in the introductory verses. After having mentioned the two marriages of the lady, first to the emperor Henry V., a connection about which nothing new is said, and afterwards to Count Geoffrey of Anjou, as well as the accession of Henry II. in Normandy and in England, he proceeds to the early history of the Normans, calling them most unusually from Hastings' invasion and Rollo's occupation down to his own days almost exclusively *Dani*. After a short survey of the growth of the duchy of Normandy during the time of the last Carolingian and the first Capetian kings, we have the conquest of England by William, of course in a spirit inimical to Harold and the English. Here unfortunately we miss, owing to the first break, what the author wrote about the latter days of the Conqueror, his son William Rufus, and the beginning of Henry I. down to the battle of Tinchebrai, 1106. Farther on, at the opening of the second book, when the author returns to the coronation of Henry II. in 1154, he enters on another digression. After describing the last Merovingian king in his degraded and empty state, v. 1782:

"Intonsus barba residens, cum crine refuso
Hac in parte sui *scoticus* esse cupit,"

he treats of the coronation of Pippin and Charles by Pope Stephen III., and of the empire of the great Charles, very much as was to be expected in the twelfth century, and from a native of the west of Europe. See v. 2026:

"Cum sibi subjectis servit Maguncia, Roma,
Parisius, triplicem sic regit ille thronum."

After this the feuds between Henry II. and Louis VII. in 1167 and 1168, especially the capture of Chaumont-en-Bauvois are narrated with several digressions. We have first the invasion of Normandy by Otto I. (946), unfortunately mutilated by another break in the text, and then suggested by the marriage of Henry's second son Geoffrey to the daughter of Conan of Brittany, the fabulous correspondence between King Arthur, "qui tunc apud Antipodes degebat," prohibiting King Henry to annex the land of the Britons. The third book opens with the death of the empress Maud, on the 10th September 1167, and her interment in the abbey of Bec; after which the narrative is taken back again to the embassy sent by the emperor Frederick I. (1165), the betrothal of Henry the Lion, duke of Saxony, to the daughter of King Henry, and the papal schism between Alexander III. and Victor IV. (1159). Even the letters of the two pontiffs and the reports of their opposite councils, involving a succinct synopsis of imperial policy from Caesar down to Barbarossa, are turned

* See also Wattenbach, *Deutschlands Geschichtsquellen im Mittelalter*, p. 360, No. 2, and ed. 1866; and Potthast, *Bibliotheca Historica mediæ ævi*, Supplement, p. 66, 1868.

into distichs. The author deduces his arguments against the superiority of the king of France over Henry II. from the fact that the ancestors of Louis were not the legitimate heirs of Charles the Great. He rejoices in all successes of the Angevin king over his feudal lord; see v. 1746:

"Conclusos triplici Gallos tenet ipse ducatu."

But much more important than such reasoning is the character given to Archbishop Thomas of Canterbury, formerly the intimate friend of the English king, but now a fugitive in France. To the great disgust of the ultramontane editor, Becket is treated, indeed, very unfairly, as it could not be otherwise expected from such a decided partisan of the king. He is introduced for the first time on the occasion of the discord between the two kings, v. 2060:

"Exul abest Thomas antistes Cantuariensis,
Foedera perturbat, proelia sola cupit."

Afterwards he is accused of having gained the favour of Pope Alexander by bribery, v. 3839, and with regard to the debates at the Council of Tours (1163), of which there is a long description, we have the very curious hint, v. 3933:

"Hic siluit Thomas antistes Cantuariensis
Ut minus doctus verba latina loqui."

Towards the end of the poem there is mentioned a truce between the two kings, at Poissy, in February 1168 according to the heading, iii. 16, but in the Epiphany 1169 according to Robert of Thorigny. Here the author alludes once more to the uncertain position of the conspiring archbishop, v. 4333:

"Reddere iura sibi si dedignatur avita,
Exul ab Angligenis iure perhennis erit";

and v. 4344:

"Nescio quid voluit, retro redire timet,"

perhaps the best evidence of the conclusion of the poem before Becket's death. The latest fact of which there is a record in the poem seems to be the visit of Henry the younger to Paris, v. 4245, which is dated by Robert de Thorigny 1169, in Purificatione Beatae Mariae (Pertz, *Scriptores*, vi. 518).

At the end of the poem, however (p. 65), are added from the same MS., and therefore indirectly from the same original, two lists of the jewels and ornaments bequeathed by the empress Maud to the church of Bec in her lifetime and after her death, and thirty-three distichs more, evidently in continuation of the poem, describing the return of the king to England in a gale, by which no other passage can be meant than that described and dated the 3rd March 1170 in *Gesta Henrici Secundi Benedicti Abbatis*, i. 3, ed. Stubbs.

That the work is the composition of a contemporary appears likewise from the description of Denmark, a country still preeminently known to an inhabitant of the lower Seine, v. 524, from the term *Metropolis Londis* (Lund), and from v. 536:

"Waldamarus ibi regia sceptris regit."

The author is fully alive to the recent importance of canon law, v. 1492:

"Hinc fluvius torrens Gratianus ad alta redundat,
Quo sine nil leges, nil ibi iura valent."

That he was a Norman, proud of his distinct nationality, is evident throughout the poem. The courtier may be discovered in v. 1732, where he insinuates too much consanguinity as the only reason of the divorce between Louis VII. and Eleonora of Poitou. That Bec is the local centre from which he writes is apparent from the vigour by which the church and castle of Poissy (Pisenum) are claimed by the abbey as its property (v. 1678), and more especially from the circumstantial description of the individual monk of Bec, who was despatched to inform the king of the death of his mother the empress (v. 2910):—

"Is regi notus tum carus tumque fidelis
Hinc magis est iteris (sic!) dulcor ipse labor," &c.

It strikes me as if this must have been the poet himself, Stephen of Rouen, provided that the authors of the *Histoire littéraire de France* and Brial have come to the right conclusion. As for the title *Draco Normannicus*, the editor does not even hint whether it is actually prefixed to the work in MS. Its meaning can be no other than *vetillum*, the Norman standard.

It is not very easy to trace minutely all the sources from

which our author collected his knowledge of previous history. In the opening of the poem (v. 2), he professes magnificently:

"Ex propriis gazis edere pauca libet."

Referring to the British king Arthur (vv. 2803, 2804), he quotes "*liber Gildae sapientis*" and "*quae Monemutensis vera loquendo canit*." The description of Childeric III., the last Merovingian (v. 1762), agrees more in spirit than literally with the well-known first chapter of Einhart's *Vita Karoli Magni*. The author knew of course his more provincial historians, especially Dudo of St.-Quentin, who is quoted by name in the title (ii. 13) referring to the siege of Rouen by Otto I.: "Dudo ponit quod hoc fuit supra pontem portae Beluacensis;" cf. Duchesne, *Hist. Norm. Scriptores*, 131. He had some annalist at his disposal, and most likely the *Chronicles* of Sigibert of Gembloux and his continuators. The best of these, Robert de Thorigny, had been himself a monk at Bec from 1128 till 1154. On the other hand, Wace's *Roman de Rou* was probably not yet published, whereas the monk of Bec, who had very little poetical fervour in common with the *trouvère* from Jersey, must have been acquainted, as I have very little doubt, with at least the *Gesta Pontificum* of William of Malmesbury, from the way in which he mentions (v. 3957) the synod of Winchester in 1072, at which, in the presence of William the Conqueror, the quarrel between Lanfranc and Thomas of York was decided in favour of the first. Though the latest dates in the work are 1169 and 1170, and not February 1168, as Brial supposes (*l. c.* p. 298), I find no traces that the author wrote with a knowledge of Becket's letters, which were hardly collected yet. He relates what he either saw himself or heard from those who did. There are many more or less local details, however, which require more minute investigation both from Norman and English scholars, before a final verdict can be given about the historical value of *Draco Normannicus*.

R. PAULI.

Intelligence.

We are in a position to say that M. Renan's *L'Antichrist* may be expected in the early part of next year. The previous statement in our columns on this subject was inexact.

"*Etruscan Inscriptions*, analysed, translated, and commented upon," by Lord Lindsay, is one of the books in Mr. Murray's list of works in preparation.

The first part of the long promised *Historical Atlas of Ancient Geography, Biblical and Classical*, compiled under the superintendence of Dr. W. Smith and Mr. G. Grove, is announced to appear in October. The work (which will be completed in five quarterly parts, price one guinea each) is to contain 41 maps of the size of those in Keith Johnston's *Royal Atlas*, together with descriptive letter-press and an account of the authorities used in constructing each map. The classical maps have been prepared by Karl Müller, the well-known editor of Strabo and the minor Greek geographers.

M. Taine is at present engaged on a History of the French Revolution.

The publication of Mr. Buckle's *Miscellaneous and Posthumous Works*, which were announced for the present season, is postponed till October.

A writer in *Fraser* (August) is disposed by fresh manuscript and other authorities to give full credence to the story of Olimpia Maldachini, sister-in-law and sovereign ruler of Pope Innocent X., as commonly told in the seventeenth century, though it was treated by Ranke as a mere romance. The life of this lady, which has been usually ascribed to Gregorio Leti, may, according to the writer, be of more trustworthy authorship.

According to *La Voix*, the autograph MS. of the memoirs of A. Khrapovitsky, Secretary of State to Catherine II., has been found amongst the papers of Prince Peter Vrazemsky. The two published editions are incomplete, and it is hoped that the original text of the work, which throws so much light on the private life of the empress, will now be restored.

SS. Tanfani, Paganini, and Lupi, of the archives of Pisa, are preparing to publish, by instalments, in 4to, *Le Iscrizioni della città di Pisa, raccolte ed illustrate*, with notes and facsimiles when desirable.

Contents of the Journals.

Gött. gel. Anzeigen, June 5.—Reviews Gaston Paris' edition of *La Vie de saint Alexis*, a poem perhaps written by Tetbald of Vernon at Rouen in the eleventh century in assonant five-line strophes, which later hands

have changed first into the rhymed verses which the thirteenth century preferred, and then into four-line Alexandrines. The historical value of the poem is therefore great, and it gives us more insight into the old French dialects in some respects than even the Oxford "Roland," also of the eleventh century.—There is also a notice of Monod's book, *On the Sources of Merovingian History*; and Ewald refers to Wright's *Syriac Apocryphal Acts of the Apostles*, as illustrating the use of the word *συμφωνία* for a musical instrument in the Book of Daniel.—June 12.—Contains good criticisms of Stamm's and Heyne's edition of Ulfilas; and of Waddington's *Inscriptions grecques et latines de la Syrie*.—June 19.—Analyses Clouet's *Histoire de Verdun*, vol. ii., at length; and Kohl characterizes Cunningham's *Notes on the Natural History of the Strait of Magellan* as being unsatisfactory.—June 26.—Reviews Köpke's interesting *Kleine Schriften*.—Kohl takes an unfavourable view of Neill's *English Colonization of America during the Seventeenth Century*.

Liter. Centralblatt, April 27.—Notices Friedrich's *The Diet of Worms* in 1521, from the letters of the Nuncio Oleander. Friedrich (Döllinger's ally) found a copy of some of these at Trent; the originals at Rome are of course not accessible. He last year published Turrecremata's *De Potestate Papae et Concilii Generalis* from the Munich library.—May 4.—Analyses Ritter's examination of Sully's *Memoirs*, especially as to Henri IV.'s great plan of overthrowing the House of Hapsburg, and establishing a European peace; which Ritter shows to be unhistorical, and falsely attributed to the king either by Sully or Sully's secretaries.—A good summary follows of von Sybel's fourth volume of the *History of the French Revolution* (to 1797).—June 29.—Notices Max Müller's *Über die Resultate der Sprachwissenschaft*, as containing a corrective of Mommsen's views as to a "Graeco-Italian race," and of similar views in Schleicher and others.—Lugebil on the *Constitution of Athens* and Mommsen on the *Römisches Staatsrecht* are reviewed at length, the former with special reference to the archonship, the latter as to the tribunate.

Bullettino dell' Instituto, June, continues its account of the excavations at Pompeii and at Certosa. The latter show the rudeness of Etruscan art in the north as compared with what it was near the coast: some objects found at Eysenbilsen in Belgium prove how far Etruscan trade extended before the rise of Rome.—July and August.—Continues the account of the excavations at Pompeii and Certosa. The objects found at the latter illustrate the religion of North Etruria; nothing has been discovered that in the least reminds us of those ghastly beings of the nether world so often depicted in the vases and tombs of the southern region of Tuscany. An attempt is made to range the discoveries in their chronological order and progress.

Periodico di Numismatica e Sragistica per la Storia d'Italia, Firenze, anno iv. fasc. ii., contains notices and a plate of the early coins of Camerinum in the thirteenth century, with the name of Bishop Ansovinus (a German name) on them, the bishops then having great temporal power. A list follows of the officials of the hospital at Altospacio, with a plate of six unedited seals. An article on the "vermillion cross on a white ground," the arms of Florence, given to the knights specially created by the people, contains a curious list of the knights appointed in the famous outbreak of the Ciompi in 1378, "Mess Salvestro" (de' Medici) heading the list.

New Publications.

DE LUVNES, Duc. Voyage d'exploration à la Mer morte, à Palmyre, à Pétra et sur la rive gauche du Jourdain. Oeuvre posthume, publiée par ses petits-fils, sous la direction de M. le comte de Vogüé. 4 vols. quarto et 3 atlas in fol. (Vol. 1 et 2: La relation du voyage laissée entièrement, manuscrite par le duc de Luyne, des recherches géographiques, historiques et archéologiques. Vol. 3: Un mémoire de M. Vignes sur la topographie etc., le journal de voyage à Karak et à Chaubak, suivis d'inscriptions arabes, traduites par M. Sauvage. Vol. 4: La géologie, la minéralogie etc., réd. par M. Lartet.) Paris: A. Bertrand. (Trübner.)

REGISTRA QUORUNDAM ABBATUM Monasterii S. Albani qui saeculo 15^{mo} floruerunt; vol. I. Registrum Abbatiae Johannis Whethamstede, Abbatis Monasterii S^{ci} Albani, iterum susceptae; Roberto Blakeney, Capellano quondam adscriptum. Edited by H. T. Riley, M.A. (Rolls Series.) Longmans.

SCRIPTORES RERUM GERMANICARUM in usum scholarum ex monumentis Germaniae historicis recudi fecit G. H. Pertz. Godifredi Viterbiensis festa Friderici I. et Henrici VI. imperatorum metricae scripta, ex ed. Waitzii. Hannover: Hahn.

UBICINI, A. Les Constitutions de l'Europe orientale. Constitution de la Principauté de Serbie annotée et expliquée. Paris: Durand et Pedone-Lauriel.

Philology.

Prophetæ Chaldaice. Paulus de Lagarde e fide cod. Reuchliniani edidit. Lipsiae in aed. B. G. Teubneri.

HITHERTO anyone who has wished to use an authentic text of the Targums has been obliged to consult the rare editions published in the first century after the invention of printing. These were printed by Jews or Jewish Christians, partly in Portugal and Spain: as in Lisbon (1491—Onkelos), in Leiria (1492—the Proverbs; 1494—the Prophets), and in Alcalá (1517—Bible); partly in Italy: as in Bologna (1482—Onkelos), in Venice (where Daniel Bomberg, of Antwerp, established his celebrated press, and published, from 1518, the three large editions of the Bible, together with the Targums), in Sabbioneta (1557—Onkelos, with Massorah), and in other places. These editions were based upon the MSS. The later ones in common use among Christian scholars reproduced the editions of Alcalá and Venice, but unfortunately not without alterations.

After Elias Levita had advised the forming a Chaldee grammar for the Targums from the Aramaic text in Daniel and Ezra to the neglect of the MSS. (see preface to his *Dictionary*, 1541), a tendency arose not only to correct the vowel system of the old editions, but also, on the pretext of their superfluity, to diminish the use of the *matres lectionis*. This was done by Le Mercier in his edition of the Targum of the Minor Prophets and some Megilloth (1557, preface), and also by the elder Buxtorf in his Rabbinic Bible, on which the Targum texts in the later polyglots were based.

Very little was done in editing Targums by Christian scholars of the succeeding centuries, but the following editions—all from MSS.—should be noticed: Taylor (two Targ. of Esther, 1655), Terentius (Job, 1663), Beck (1680 and 1683, Chronicles), Wilkins (1715, Chronicles). The last edition of a Targum was that of J. D. Michaelis, who in 1775 reprinted the Targum of Hosea, edited by van der Hardt in 1702. There were of course several Jewish reprints, on which v. Steinschneider, *Zeitsch. d. Deutsch. Morg. Ges.* xii. 171, and cf. Frankel, *Zu d. Targ. d. Proph.* p. 40, note.

It was only on October 1, 1857, at a general meeting of the German Oriental Society held at Breslau, that it was resolved, on the motion of Prof. Brockhaus, of Leipzig, to promote and support a critical edition of all the Targums (*Z. D. M. G.* xii. 195, 199; xiii. 320), but this resolution was never carried out.

Semitic philologists will under these circumstances share our great joy at seeing that Prof. de Lagarde has broken the ice, though we regret to add that this has not been done without personal sacrifice, for he has once more had to defray the whole cost of printing. In the hope of giving a solid basis to the grammatical study of the Targums, he chose the oldest extant MS., viz. the Codex Durlacensis (A.D. 1105), which contains the Nebhiim of the Jewish Canon in Hebrew, with the Targum wrongly ascribed to Jonathan bar Uzziel. It was bought at Rome by Reuchlin in 1498, and was used by P. J. Bruns, who collated parts of the Hebrew text for Kennicott's Bible (cf. also Eichhorn's *Repertorium*, xv. 174). From this codex we have here a most exact copy of the consonant text of the Targum. In the very rare cases where the MS. has lacunae they are filled up from Bomberg's first edition of 1518. The editor was not in a position to add the vowel-points of the MS., as this would have considerably increased the expense. But this omission is not to be greatly regretted, for the reconstruction of the probable pronunciation of Aramaic words depends chiefly, we think, upon etymologic reasons under the guidance of the *matres lectionis*, which are of course

left untouched. We fear that an investigation of the vowel system of the Reuchlin MS., for which the editor seems disposed to make further sacrifices (p. iv), however useful it may be, would have only a negative result. It would probably show that the punctators of the Targums did not follow a tradition of any great age or authenticity, but merely fixed a very late pronunciation which had already become arbitrary and corrupt. Must we not indeed infer the absence of points from the use of a double ' or 1 to express the consonant sounds, while for the vowels we have the single *matres lectionis*? Besides, Elias Levita maintains that the Masorites paid no attention to the vocalisation of the Targums, and expressly states that the very old MSS. which he saw had no vowel-points at all. We must perhaps admit one exception, in the case of the vocalisation hinted at in the Massorah of Targum Onkelos, but this was fixed by the Madinchāe, and seems to depend upon the actual pronunciation of the Eastern Jews as influenced by Syriasm (v. Geiger, *Z. D. M. G.* xviii. 649, 657).

After the text of the Targum itself (pp. 1-489) there follow (pp. 490, 3-493, 32) from the same MS. the *Reshū-jōth* or *Harmōnin* ("licences"), i.e. introductions in which the Turgemān asks leave of God and the congregation in the synagogue for reciting the Haftarah. Nos. 1, 2, and 5 are the most interesting: 1 and 5 rhymed; 2 an acrostic; 1 and 5 alphabetic, and followed by an acrostic of the name of the Paitān (cf. Prof. de Lagarde's conjecture on Ps. xxv. and xxxiv., *Academy*, vol. iii. p. 12). No. 6, which is in prose, praises Jonathan bar Uzziel as a disciple of Haggai, Zechariah, and Malachi. No. 7 and 8 contain the liturgical blessings of God after finishing the Haftarah. (On all this v. Zunz, *Gottesdienstliche Vorträge*, pp. 380 a, b, and 356 d, and *Literaturgeschichte der synagogalen Poesie*, 1865, pp. 19 and 79 c.)

Besides a detailed description of the Reuchlin MS., the comprehensive preface contains (pp. vi-xlii) the whole of the marginal notes to the Targum, which are of great importance. They consist of fragments of different Targums to many passages, and are often of considerable extent. The longer ones are marked (1) "Jerusalem Targum," (2) "Other Targum," (3) "Other Book," or (4) the two latter notes are combined (v. pp. xii, 17; xxxiv, 20; xxxviii, 19). The shorter ones and those which refer to single words are marked "Different" and "Other Expression."

Now classes 1, 2, 4, to judge from their contents, all contain Jerusalem Targums, but the difference of their marks suggests that the Turgemānin, who had to read the official Targum in the synagogue, used to increase the Jerusalem glosses already extant in their own copies from the margin of other copies which they happened to meet with. For "Other Book" means another MS. of the official Targum (cf. p. xv, 11, on 1 Sam. v. 11), and it is not probable that in later times they borrowed from a complete Palestine Targum of the Prophets. How little the marginal notes of the Reuchlin MS. exhaust what contemporary and later Rabbins knew of this Jerusalem Targum may be seen from the fact that quotations from it made by Rashi (who died in the very year that the codex was written), Kimchi, and others, do not exist in the MS., except one Targum of the Haftarah, Is. lxvi. 1, but this has about twenty-five words more than in the Vatican MS. (v. these quotations collected by Zunz, *Gottesdienstl. Vortr.* pp. 77, 78).

Since the language of all the Targums, as is shown by its grammatical peculiarities, is a Palestine-Aramaic dialect, we have to seek the origin of all in Palestine (v. Nöldeke, in *Gött. gel. Anz.* 1872, p. 831). The differences, lexical and other, find their explanation in the different histories of these interpretations after they were transplanted

from their native soil into Babylonia and other countries. We know also from Zunz's and Geiger's researches that among the Jerusalem interpretations of the Pentateuch—and to these the fragments first edited by Prof. de Lagarde bear a twin likeness—we possess pieces of the oldest and least refined of all Targums. To these the Aramaic versions of the Hagiographa come nearest in affinity, as has been acknowledged for centuries; while on the other hand the Targum Onkelos of the Pentateuch and Targum Jonathan of the Prophets have passed through the Babylonian schools, and have been so cleared of old exegetical additions and alterations, and so formed word for word from the Hebrew text, that even their Aramaic idiom has become but an artificial and defaced language.

The present form of the Targum of the Prophets is ascribed by the tradition of the Turgemānin—wrong as to the person, but right in its conception of a Palestine origin—to Jonathan bar Uzziel. But in fact it seems to depend for the most part on the redaction of Rabbi Joseph ben Chama of Babylon (ob. 325), who laid great stress on the Targums as a source of exegetical information (v. Frankel, *Zu d. Targ. d. Proph.* p. 11, line 1). From the method of interpretation followed in this official Targum, that of the Jerusalem Targum in de Lagarde's edition is not in its essence different. The peculiarities which Frankel quotes are here again met with, but with fuller extension and licence. What there is old in them, what added at a later time, can only be decided by examining the single passages; but in many instances we have in these incoherent fragments common matter which points to an earlier cycle of legends. Cf. e.g. on Josh. xiv. 15 and xv. 13 with xxi. 11 (Gen. xxiii. 8); Josh. xv. 16 with xviii. 17; Judges v. 4 ("the dew which will resuscitate the dead of Israel") with Targ. of Ps. lxviii. 9, 10, Talmud Chagiga, 12 b (Levy's *Dict.*); Jud. xii. 8, 9, with Targ. Ruth i. 1, iv. 17: Boaz = Ibsān, cf. Mercerus' edition. Sometimes it is evident that in one gloss another is inserted, as in Jud. v. 5, where the lines p. x, 21, עני—xi, 12, מביין, are a second Targum.

Of course all these marginal notes contain valuable contributions to the Aramaic dictionary, but it will not be always easy to decide whether we have before us a genuine Aramaic expression or one moulded on another—as the Arabic—pattern. I should think e.g. that "meth'arkhin," *they quarrel*, is formed from the Arabic "muta'arrakin" (v. Berggren, *Guide français-arabe vulgaire*, s.v. "battre") rather than from the Hebrew "arakh milchāmāh." Are Mohammedans meant in x. 24?

Very frequently the glosses contain several synonyms of vessels and implements having different names in different countries, e.g. Judg. iii. 22, *goad*, Jerus. (and Peshita) "mas-sāsā," cf. Arab. "minassat"; iii. 19, three terms for *leather* or *skin-bottle*; iv. 21, *hammer*, "arzapp'thā," Eastern Targ. (and Syriac), "marzapp'thā," Palestine (cf. v. 26); the Arab. has borrowed both forms, "irzabbat" and "mirzabbat"; *ibid.*, *peg*, "d'shār," Arab. *disār*; vi. 19, three terms for *kettle* and two 1 Sam. ii. 14; vi. 38, *bowl*, the terms *λεκάνη* and *lagena*, cf. Targ. Job xxxii. 19. In like manner we have *neck-ornaments* in Judg. viii. 21, 26, and *concubine*, viii. 51. To another class belong "qibhl = q'dhām," p. ix, 25; three terms for *bind*, Jud. xv. 10; instead of "paggar," of the official Targum (Jud. vi. 25), we have "pakkar," which, as far as we know occurs only in the Jerusalem Targum, marked "Other Expression."

A few marginal notes refer to different vowel-points, as Judg. iv. 13, "karkē" and "k'rake"; 1 Sam. i. 6, Pael and Afel; &c. But we may not dwell longer upon these highly important notes.

It is only for practical reasons that the editor (v. his

statement, preface, p. xlii) calls the idiom of the Targums "Chaldaic." This name as used for "Aramaic" seems indeed older than Jerome, for Berosus uses *χaldaïorri* for an Aramaic or at least a Semitic dialect (ed. Richter, p. 50; Euseb. *Chron.* ed. Majus, i. 11). The Palestine Jews would have said "Syriac," the Babylonian "Aramaic" (v. Nöldeke, *Zeitsch. d. Deutsch. Morg. Gesell.* xxv. 116).

Among other interesting etymologies, Prof. de Lagarde proposes (p. xliii) to identify the Syriac "paddān" with the Persian "paitidāna"; but my honoured friend and teacher now authorises me to state that he withdraws the application of this to Paddan Aram. The latter is very probably identical with what was afterwards known as the village of Paddānā, in the neighbourhood of Charan.* This identification was expressly made by Barbahlul, who knew the village, in a MS. belonging to Dr. Socin, s. v. *Pāran dārām* (sic), and long before was assumed by Ephrem in the *Carmina Nisibena*, p. 31, i., 33, ii. (v. Bickell, p. 138).

We beg to invite particular attention to what deserves a notice beyond our present space, viz. the emendations, &c. of the text of the Hebrew Bible, to which the editor devotes five pages at the close of the preface. Of these emendations fifty-eight refer to the Psalms, thirty-two to Isaiah, seventeen to Job, five to Kings, one corrects Col. ii. 16.

We must, in conclusion, not omit to note the excellent getting-up of the work, and especially the solidity and clearness of the Hebrew type, obtained by Prof. de Lagarde for the university printing-office at Göttingen. It is the more to be regretted that there was not a sufficient supply of type to provide some diacritical points. In this, as in other respects, there is still much need of additions which would render the press more worthy of the university and of such works as that now before us. G. HOFFMANN.

Assyrian Dictionary. By Edward Norris. Part III. Williams and Norgate.

An Assyrian Grammar. By A. H. Sayce, M.A., Fellow and Tutor of Queen's College, Oxford. Trubner.

It is with special pleasure that we notice the appearance of these two works, which are equally creditable to their authors, and hopeful omens for the young study of Assyriology. The third part of Norris' great Assyrian dictionary treats of the vocabulary from the letter M to nearly the end of N, thus comprising only two letters. The reader will see from this with what thoroughness the material has been examined. We could wish, however, that the author had limited himself more in the selection and particularly in the quotation of authorities, or had at least been more sparing in the use of cuneiform characters. We should think an exact transcription would be almost as useful for the student, since the original texts have been already lithographed in the English and French collections of inscriptions. An exception would be only necessary in quoting from an unpublished text.

Plan and mode of treatment are the same as in the two first volumes, and though (as we remarked last year in the *Academy*, vol. ii. pp. 49, 50) we should have preferred a different arrangement, it is clear that no alteration was any longer possible. We therefore heartily welcome this fresh proof of the extensive reading and unabated energy of the author, who works with an unpretentiousness which marks the great scholar, only anxious for the due exhibition of facts. We reserve the expression of our dissent with reference to certain points of detail for an intended publication of our own two Assyrian

glossaries, and we will only point out the importance of this volume for the historical study of religion, inasmuch as it includes the names of all the Assyrio-Babylonian divinities.

We now pass to the Assyrian grammar of Mr. Sayce. Like the preceding work, it makes altogether the impression of conscientious research, and is, all things considered, a valuable addition to Assyrian literature. The author himself states that it is designed especially "for comparative purposes," and we have no doubt that Semitic philologists will duly appreciate it under this aspect. A number of points of view indicated by the author are, in the highest degree, deserving of attention. The part on the formation of nouns in particular is not only in a high degree accurate as a representation of facts, but furnishes most interesting illustrations of the relation of Assyrian to the cognate languages. We are also glad to find that the author has avoided several misleading and incorrect views of recent Assyriologists, which spring from a too hasty combination of the peculiar phenomena of Assyrian with those of other Semitic languages. The remarks on the pronouns and numerals are mostly such as we entirely concur with. It is otherwise with the verbs. Here we cannot help expressing grave doubts as to many of the theories proposed by Mr. Sayce. Not that his account of the fundamental features of the Assyrian verbal formation is not substantially accurate, but it seems to us that he has attached too much weight to the authority of Dr. Hincks, eminent as this lamented scholar must be admitted to be. He has thus been misled into adopting a number of tense and mood distinctions, the existence of which in Assyrian cannot be at all proved. We hope to return to this subject in another place, and therefore abstain from entering into further detail, as also from following the author in his sketch of the Assyrian syntax, in our opinion one of the most meritorious parts of the book. We may be allowed, however, to express a regret, which has repeatedly forced itself upon us in perusing the work, relative to the omission of references for the examples adduced. Not that these have been selected arbitrarily; indeed, our own reading enables us to guarantee their reliability. But the reader who is less acquainted with these new studies, and perhaps somewhat sceptically inclined, may be excused for wishing to control the author's statements by a reference to the *data* on which they are founded. In many cases, too, the Assyriologist himself will desire to test the character of the example by an inspection of the original text, simply on the ground of the variety of interpretation to which cuneiform writing is liable. After giving this free expression to our wishes, we once more congratulate both authors on their excellent works, and trust we may often meet them again in the field of Assyriology. EB. SCHRADER.

New Publications.

- BAUER, Wölg. Zu Euripides' Iphigenie auf Taurien. Kritisches u. Exegetisches. München: Lindauer'sche B.
 CAPELLER, C. Die Ganachandas. Ein Beitrag zur indischen Metrik. Leipzig. (Jena: Frommann.)
 ERMERINS, F. L. Epistola critica ad Soranum a se editum. Accedit de vita Ermerinsii editoris Epilogus. Utrecht: Kemink u. Sohn.
 GARCKE, H. Die wichtigsten anomalen Verba bei Homer. Im Anschluss an Köpke's Homerische Formenlehre. Altenburg: Schnuphase.
 KOZIOL, H. Der Stil d. Apuleius. Ein Beitrag zur Kenntniss d. sogenannten afrikanischen Lateins. Wien: Gerold's Sohn.
 LENORMANT, Fr. Essai sur la Propagation de l'Alphabet phénicien. Vol. I. Part I. Paris: Maisonneuve.
 LENORMANT, Fr. Lettres assyriologiques. Vol. II. Paris: Maisonneuve.
 MARTIN, E. Das historische Studium der neueren Sprachen und seine Bedeutung für den Schulgebrauch zunächst in Baden. Freiburg i. B.: Wagner.

* I am indebted to Professor Wright for a reference to his *Catalogue of Syriac MSS. in the British Museum*, iii. 1127, which will soon be published; and to Mr. Cheyne for one to Chwolson, *Saahir*, i. 304.